





L.P. Yeller.

DISEASES

OF THE

UTERUS,

A

SERIES OF CLINICAL LECTURES,

DELIVERED AT THE

HOSPITAL LA PITIÉ

BY

M. LISFRANC,

AND

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TRANSLATED FROM THE FRENCH

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TRANSLATOR'S PREFACE.

I do not think that I speak unadvisedly, in saying that diseases of the uterus are not so well understood as their importance merits. The knowledge of the morbid changes on which they are dependent is quite imperfect; and, as the indications of treatment arise at present, not from pathology, but from symptoms, their therapeutics is of course more or less empirical.

The reason is apparently obvious. We are prevented, by scruples of delicacy on the part of patients, from studying them in the only way in which they ought to be studied and can be understood. Sight and touch alone can enable us to ascertain with precision the pathological condition of the parts and the correspondent indications of treatment. From want of this exact knowledge stimulants and astringents are often prescribed, as in leucorrhœa, for example, when antiphlogistics would be far more appropriate. From a misunderstanding of the physiological changes which the uterus and its functions undergo, the digestive and nervous derangements of the *critical age* are treated by tonics and stimulants, opiates and cathartics, with an entire disregard of the organ whence they originate.

It is impossible to say how soon the profession may enjoy greater facilities of studying this highly important class of diseases, so intimately connected with the comfort and happiness of the individual, the sanctity of the marriage vow, and the reproduction of the species. Opportunities, however, will

not be wanting to the physician to learn their true character, whenever the earnestness of his own convictions impresses a sense of their importance upon the minds of his patients.

This work is by the distinguished surgeon of *La Pitié*. Its author not only enjoys a high reputation generally, but also has a special reputation connected with diseases of the uterus. A large number of patients suffering from them are annually admitted into the hospital over which he presides. His private practice in the same class of diseases has, for a series of years, been immense, probably greater than that of any of his professional contemporaries.

With the exception of the chapter on Amputation of the Neck of the Uterus, this work is the reproduction of lectures published, under his own immediate supervision, in the *Gazette Médicale* (Paris). It is however more complete, more methodical, and contains details which the limits of a Journal necessarily exclude. Embodying the experience, observation, and experiment of a series of years, it is of course almost entirely original. The views of uterine disease which it presents are at once ingenious and novel. No work upon the same subject has ever been presented to the profession, which combines, apparently, so many of the necessary requisites for an eminently practical work—a work to which the student of disease, whether young or mature in his art, may turn to draw principles of action in some of the most difficult and embarrassing cases that he is ever called upon to treat.

This work also contains information and data relative to amputation of the neck of the uterus, which exist nowhere else. They will be found extremely interesting and important. The facts, gathered from various sources, are now for the first time presented to the public, in the chapter on that subject.

G. H. L.

EDITOR'S PREFACE.

SHORTLY after I entered the hospital *La Pitié* as an intern student, and became prosector to Lisfranc, he commissioned me to publish, in my own name, his Clinical Lectures upon Diseases of the Uterus, the notes of which he would previously revise. With this view, he delivered a course of lectures, which I noted down with the most scrupulous accuracy. The report of each lecture was then submitted to his approbation. The greater portion of the series was published in the *Gazette Médicale*, in four very full articles. The remainder, on Amputation of the Neck of the Uterus, did not appear; it was Lisfranc's wish personally to communicate his principles with regard to it, which he did, in June, 1834, in a Memoir read before the Academy of Sciences. Experience soon showed me the fatality of amputation of the neck. Results, so different from those announced, excited painful doubts; and I prudently deferred the publication of this portion of my notes, until, in 1835, doubts became certainty. At this time, a list of the successful amputations was demanded by the Institute. I was commissioned to look up the materials for its formation. But, after examining the theses of former interns and Lisfranc's private papers, the number of cases found was very small in proportion to the *eighty-four* successful cases announced. Lisfranc then dictated to me the names of private patients, who were unknown to me.

From this time I dismissed the idea of publishing my original notes on the subject. I felt strongly the necessity of cau-

tion in making myself responsible for facts, which it was then in my power to appreciate. The facts in the present chapter on Amputation of the Neck of the Uterus are correct; I owe them to my professional brethren and to humanity; and I have spared no trouble in ascertaining their authenticity.

This work does not purport to be a complete Treatise on Diseases of the Uterus. It is confined to those which form the subjects of Lisfranc's lectures — my sole object having been to present to the profession an accurate and full transcript of his views. I have been particular in giving the reader notice of any deviations or additions, which were necessary, either to explain or render them more complete. It may, therefore, be considered as a full and accurate exposition of the principles and practice of the surgeon of *La Pitié* with regard to this class of diseases.

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DISEASES OF THE UTERUS.

PART I.

CHAPTER I.

REMARKS ON THE SURGICAL ANATOMY OF THE FEMALE
ORGANS OF GENERATION, DESIGNED TO ELUCIDATE
DIAGNOSIS, AND TO SIMPLIFY OPERATIONS.

COUNTRY, climate, and constitution often occasion varieties of conformation in the genital organs of women important to be known, in order to prevent what is natural from being considered as accidental or pathological. Thus, in the women of warm countries particularly, the sexual organs are placed much higher, and much more in front, than in those of cold climates, and the orifice of the vulva has, also, the same direction. We will now review, in their turn, the different parts of these organs.

I. THE PERINÆUM

Besides the tissues enumerated in treatises on descriptive anatomy, the perinæum contains an erectile

tissue whose thickness varies in different individuals. In the efforts made by women to expel a foreign body from the cavity of the pelvis, this erectile tissue frequently forms upon the perinæum a tumor almost hemispherical, soft, spongy, and generally as large as the extremity of the little finger; it has, occasionally, been considered anormal, but it disappears with the efforts which produced it.

The breadth of the perinæum is, by no means, constantly the same; generally, it varies from four lines to an inch.

The same variety is observable in its antero-posterior measurement, or the space between the anus and vulva. The perinæum, far from occupying the whole of this space, has less antero-posterior extent than would at first be supposed. In fact, its anterior portion, or that towards the vulva, ceases to constitute a part of the perinæum, being formed by a transverse fold, flattened from above downward, and slightly concave in front, where it terminates in a thin edge, which continues, from before, backward and upward with the mucous membrane of the vagina, and downward with the skin covering the perinæum. This fold consequently leaves above it a small cavity, corresponding to the posterior portion of the opening into the vagina. The small triangular surface, seen below it, is the part designated by anatomists, *fossa navicularis*.

When the space between the anus and vulva is very broad, this fold projects sometimes many lines, whilst, on the other hand, it is scarcely visible when the interval is narrow. Hence the length of the vulva

is infinitely variable ; in fact, the broader the perinæum, the shorter the vulva, and *vice versa*. It may be remarked, however, that notwithstanding the breadth of the perinæum, and the shortness of the vulva, the vagina loses none of its extent, but retains the same dimensions.

The earnestness with which we have pointed out so slight an anatomical peculiarity, is fully justified by the practical and interesting conclusions which it suggests.

1. In child-birth, the perinæum itself is very rarely lacerated by the passage of the child ; the rupture of this fold alone is much more frequent ; it is an accident, however, of quite secondary importance.

2. It may be cut, indeed, without danger of implicating the perinæum, whenever the utmost extension of the vulva is needed for the purpose of facilitating, by additional space, surgical operations ; by this means, an obstacle is removed which we have frequently found in practice to be much greater than one would suppose *a priori*.

Suppose you are extracting a voluminous tumor ; the separation of the large labia by its passage occasions a strong transversal tension of this fold, whilst, at the same time, it projects more in front, in consequence of the recto-vaginal wall being pushed backward, so that the tumor, which is behind, is partially covered by it. It is under such circumstances that it is ruptured by the head of the fœtus. In a difficult case, the skilful surgeon finds his account in previously removing any obstacles which may impede the execution of his designs.

3. In amputation of the neck of the uterus, we shall see that one of the conditions most essential to the successful performance of this operation is, to draw the neck outside of the vulva. When the uterus reaches the lower part of the vagina, it is resisted by this fold ; the difficulty is overcome by carrying it slightly forwards, a manœuvre similar in every respect to that performed in delivering by the feet.

4. This perinæal fold resists the introduction, in the same way that it opposes the egress, of any foreign body. If it be not carefully avoided in introducing the speculum, the instrument pushes it inwards, causes pain, and does not enter. Here, we simply point out the fact ; in speaking of the application of the speculum, it will be shown how to avoid this inconvenience.

II. THE LARGE LABIA.

In early life, the external labia are small, and scarcely close the opening of the vulva ; nor do they attain their full developement until the period of puberty, at which time they form the two rounded prominences usually described. The mucous membrane, lining their internal surface, is at this time of a very lively red tint, which changes to a deeper red as age advances, after repeated child-bearing, or by their abuse in sexual intercourse. At the same time, the labia become thinner, softer, moist and pendulous, and easily separated. These changes, however, are not always so decidedly marked ; and it is not uncommon to see these organs in women, who have

borne a numerous family, retain, to quite an advanced age, some remains of the freshness of their early years. The large labia, in warm climates, are not only more developed, but their cellular tissue is also finer and more elastic. Frequent indulgence in sexual enjoyments, by which these organs, as well as the mons veneris, are compressed, occasions atrophy of their subcutaneous cellular tissue, and a consequent diminution of their fulness.

Although the cellular tissue of this, as of other apertures of the body, does not admit of a large quantity of fat, still it accumulates in very fat persons, in such quantity as to swell these organs to a considerable size ; and this occasions the depression, in which the orifice of the vulva is then found. Hence arises more or less difficulty in *touching* ; the hand is separated from the entrance into the vagina by their entire thickness, and the finger of the examiner cannot reach the uterus. To obviate this inconvenience, the patient is laid upon an inclined plane, as in the operation for the stone ; an assistant separates the labia, and the hand, being placed edgewise so as to pass between them, can then be carried to the entrance of the vagina. Without this precaution, the operator would lose, at least, an inch, an enormous loss from the length of the finger.

Physiology teaches that the large labia are effaced, and thus assist in the enlargement of the vagina during the passage of the head of the fœtus, or any other voluminous body through the vulva. The same phenomenon takes place, more or less completely, when the foreign body is entering, instead of leaving,

the vagina. Thus, in the application of the speculum, their obliteration is in proportion to the size of the instrument and the capacity of the vagina. The speculum carries them, more or less, along with itself; therefore, as soon as it is placed against the vulva and its introduction commences, the labia, which were held apart, must now be left loose, otherwise they would be uselessly pulled upon, and the benefit of their obliteration lost.

One of the reasons which have induced us to relinquish, in ordinary cases, the use of the bi-valve speculum is, that it occasions greater pain by dilating the vulva from within outwards.

III. THE SMALL LABIA.

In some women, the inner labia are very small, scarcely rising above the surrounding surface; in others, on the contrary, they are of an immoderate size, and project beyond the large labia. With certain Africans, the Hottentots, for example, they form two lateral lobes, sometimes united anteriorly, and projecting far beyond the vulva; they are then designated by the name of apron (*tablier*).

In the adult, they are firm, erectile, and of a rose color; they lose their color and firmness, generally, at the same time as the large labia, beyond which they, at this time, often project, becoming soft, flaccid, and of a grayish tint.

Like the large labia, they contribute, by their obliteration, to the enlargement of the vagina.

According to Serres, these organs exercise another

office of considerable importance. Being pushed back into the vagina by their posterior portion, at the moment of sexual approximation, their extremity, which is attached to the clitoris, is drawn downward and forward, and this organ consequently pressed against the dorsum of the penis ; thus augmenting the liveliness of the sensations attendant upon this act. It is therefore very important to spare these organs, in an operation, as much as possible ; if it be true, as is very probable, that the frequency of conception is in a direct ratio to the amount of enjoyment experienced by the woman.

IV. THE URETHRA.

The situation of the urethra externally is not, always, the same. It has been seen to open into the vagina, and even into the rectum ; but, in these cases, there existed in the vulva other anatomical variations which will presently be pointed out. We have seen this canal opening upon the mons veneris ; the subject was a young woman ill with typhoid fever ; it became necessary to pass the catheter ; the patient making no remark, the urethra was sought for in its usual situation, but, to our astonishment, was not to be found there. After some search, a small red tubercle was discovered amid the hair covering the pubis ; a curved catheter, such as is used for men, was easily passed into the bladder.

The urethra of women, whose vulva is short, and who have had frequent sexual relations, is pushed backward and upward, behind the symphysis pubis,

and to such a degree, that, in order to pass the catheter, it becomes necessary to bring this canal forward, by passing the finger into the vagina behind the pubis, and pressing upon the urethra from above downwards, and from behind forwards. The canal being then brought into view, the operation is easy.

V. THE VAGINA.

The lower orifice of this canal varies greatly in size. In young virgins, its posterior part is ordinarily closed by the hymen, a membrane which is generally thin, though it is sometimes of the thickness of six lines. This fold does not become semi-lunar till infancy, and in those cases in which its form is circular, it has not undergone the change till puberty, according to Ruisch and Meckel. The hymen membrane may be double; Ruisch cites one instance of the kind, and Lisfranc saw two cases which occurred in the practice of Pelletan.

We have stated that this membrane existed in virgins; its absence, nevertheless, is no certain sign of the loss of virginity, inasmuch as its presence, in certain cases, might lead to a mistake directly the reverse. Thus there are women in whom this membrane is so slightly developed, that many anatomists have denied its existence at all, contending that the small duplicature, so considered, was nothing more than an enlargement of one of the mucous rugæ in the inferior portion of the vagina. On the other hand, this membrane has been found, in many instances, sufficiently strong to prevent sexual intercourse; these

are, however, the less frequent cases; ordinarily it disappears, being gradually obliterated, according to Haller, when this act takes place, or rather it breaks, producing those small, fleshy tubercles called *carunculæ myrtiformes*. Though scarcely visible in some women, they are, in others, very long, flat, fluctuant, smooth, and of a rose color. Care must be taken not to confound them with syphilitic excrescences, an error which needs but to be mentioned to be avoided.

The interest generally attached to the existence of the hymen is well known; the surgeon, therefore, ought never to destroy it, unless the indication be imperative and indispensable. Nevertheless, every consideration should give way, if, by closing the orifice of the vagina, it obstructs the flow of the catamenia, or if any internal affection of the genital organs renders local examination urgent, and, *à fortiori*, necessitates medical applications to the very locality of the disease; in these cases, the obstacle should be removed without hesitation, by making a crucial incision across the centre of the membrane. It is a practice, with ourselves, to remove the four little flaps left by this operation, for the following reason: if suffered to remain, they are exposed to accidents of more or less gravity; they may, from the irritation occasioned by repeated rubs, and followed by successive inflammations, become carcinomatous, or, at least, very painful; results which may the more reasonably be feared, when these flaps are, as is oftentimes the case, of considerable size.

Some practitioners, it is true, have objected to the latter part of the operation. According to them, the

cicatrization of the small wounds, caused by the excision of the flaps, will contract the orifice of the vagina, and endanger lacerations not less serious than the irritation, which it is the object of the operation to avoid.

These accidents are, undoubtedly, to be feared in certain cases; but is it not in the power of the surgeon to prevent them? If the extent of the cicatrix give room to fear that contraction may ensue, it may be easily averted by employing, for some days, a pledget of a size graduated to the result desired. We have been directed by these principles hitherto, and as yet have had no reason to regret their guidance.

The orifice of the vagina is very dilatable in young girls or nubile women; likewise, in women who have borne children, though much less so. Its dilatability diminishes as age advances, insomuch that it scarcely exists at all, at the period when the catamenia cease, and becomes still less with those who are older. The organs of generation in these latter, having no longer any function to fulfil, atrophy; the vagina becomes very narrow; its mucous membrane, once soft and covered with rugæ, is now smooth, whitish, and shining; its orifice, no longer a supple ring, yielding to the finger by which it is dilated, is now hard, and crackles at the slightest effort to overcome its resistance.

It is not difficult to conceive the great importance of these physiological data. They establish practical indications not to be neglected by the young practitioner. In fact, whenever it becomes necessary to explore the organs of generation, ignorance, *a priori*, of these changes in the extensibility of their tissue,

would lead to attempts painful, to say the least, and frequently unsuccessful.

Thus, when the patient to be examined has not passed the adult age, a common speculum, number 2 or 3, should be employed, unless there happen to be some individual indications not cognizable, generally, but by examination. But, in a case of old age, in which the organs have undergone the modifications just mentioned, the speculum is not to be used unless indispensably necessary, and then its introduction should be effected gently and slowly, to avoid lacerations which, oftentimes, never heal. Sometimes, indeed, the orifice of the vagina is so contracted, that it will scarcely admit the little finger, and more than once we have been obliged to dilate, with prepared sponge, for eight or ten days beforehand, and not until then was it possible to reach the uterus.

Anatomists, in general, have given no particular description of the form of the upper part of the vagina. In a work recently published, upon diseases of the uterus, it is said, "*in a state of moderate distension this canal is cylindroid.*" Now this is an error which deserves to be pointed out, inasmuch as a knowledge of its real form is of great interest.

Though the vagina is contracted near its orifice, its superior third is dilated to an astonishing degree, insomuch that it can be pushed back freely in all directions, oftentimes even against the walls of the pelvis. Without this conformation, it is impossible to explain the facility with which the uterus prolapses, enveloped by the walls of the vagina, instead of pushing them before itself. On the supposition of its

cylindrical shape, the finger, on reaching its extremity, would be unable to ascend higher and examine the body of the uterus; and the physician deprived of this means of exploration, would be restricted to an examination by the rectum and hypogastrium, — a method which is very uncertain, especially by the hypogastrium, and which, when practised by the rectum, requires great experience to attain any degree of certainty.

But it is not so; the upper portion of the vagina is, as we have already stated, enormous; and, by observing the precautions indicated in our remarks on *touching*, its walls may be pushed very far upward, and the lower third, at least, of the body of the uterus be explored.

The posterior and lateral walls of this portion of the vagina are immediately connected with the peritoneum, so that a perforation here would communicate with the cavity of the abdomen; in front, the fundus of the bladder, which rests upon the vaginal wall, would be opened.

It was long believed that the attachment of the vagina about the neck of the uterus was annular, and of linear breadth; it is an erroneous belief, says Lisfranc, and one which has endangered, and nearly caused the rejection of, an operation which has since proved so successful in our hands. Deceived by this false anatomical idea, surgeons were in constant fear of penetrating into the peritoneal cavity. They amputated the neck very near its lower extremity; and the disease, being thus only scotched, relapses were about as numerous as the operations.

We have since shown, continues Lisfranc, that the insertion of the vagina upon the neck is much broader. On measurement, in more than a hundred cases, we have found its width to vary from six to fifteen lines, and the least distance from the inferior part of the neck to the peritoneum, which we have noted, is nine lines in front and ten behind. This discovery has enabled us to excise, without fear of accident, three quarters of an inch of the uterine neck, still leaving the insertion of the vagina sufficiently strong to bear the weight of the viscera. The immense advantage — in the latitude which it allows to the operator — of this anatomical conformation is evident.

The measurements just stated are those of the neck in a healthy condition. Its pathological state is still more favorable to the operator; thus, for example, in proportion as hypertrophy increases the dimensions of the neck, it enlarges the insertion of the vagina.

There is still some discrepancy of opinion as to the contractility of the vagina. *Perhaps*, it has been said, *the vagina has an obscure contractility, like that of the uterus in its unimpregnated state, or that of the dartos muscle.*

It is true, that the vagina is, generally, easily dilated; but is not that rugous circle — seen at the extremity of the speculum during its introduction, and which enables the operator to scrutinize the whole extent of the mucous membrane, and which, in certain cases, occasions considerable resistance — owing to the contraction of its walls? Is it not, also, the contraction of the vagina, which pushes its coats between the blades of the jointed speculum?

The contractility of this organ is not so obscure, then, as to be a matter of reasonable doubt; and when its irritability is increased by a slight degree of inflammation, its contraction is powerful enough to prevent the introduction of the speculum; moreover, when *touching* in this condition of the parts, the finger is closely pressed on all sides by the mucous membrane.

VI. THE UTERUS.

In this rapid exposition of the surgical anatomy of the genital organs, we follow the example of the lecturer in confining ourselves to those points of which a knowledge is indispensable in practice; consequently, we shall omit all measures of the diameter and thickness of the walls of the uterus. How, indeed, is it possible in *touching* any one point of this organ, to appreciate a difference which frequently consists of a few lines only, to say nothing of individual variations? The inutility of such measurements is evident. Røderer, in his Tables of dimensions of the uterus, shows that the length of this organ varies from two and a quarter inches to more than three inches.

The pathological condition of the uterus, then, is not detected on examination, solely by its development, which is at times scarcely perceptible, but by other particulars also, which the *touch* or sight, alone, can duly appreciate.¹

¹ As it is not uncommon, in professional practice, to hear it said that a woman has an uterine neck of such or such a diameter, we

A great deal of practice, however, is required to attain this knowledge, observes Lisfranc; it can be acquired only by having *touched* a large number of women. We shall now detail the different signs, with their characteristic peculiarities, which, long experience has taught us, belong either to a pathological or healthy condition of the organ.

We shall examine, first, the neck, and then the body of the uterus.

1. *Of the neck of the uterus.*—All necks are not alike, having neither the same dimensions, nor the same density; and their form is equally variable. The same may be said of the lips of the os tincæ, examined separately. These differences, which it is very essential to know, have been but superficially mentioned by obstetricians.

To be able to judge accurately of the condition of a neck, practice in *touching* is necessary. This is, perhaps, one of the most difficult and most delicate operations in surgery; frequently, it is absolutely necessary to *touch* a neck many times, and at intervals, and under different circumstances, whenever the utmost possible certainty of diagnosis is desirable.

In fact, the neck varies in density and dimension in the same month, and still continues in a physiological condition. During the catamenia, and even some days afterwards, it is more voluminous, and softer to the touch; it then feels as does a neck at the second month of pregnancy.

may say that its breadth, in general, in an adult woman who has not yet borne children, varies from 9 to 11 lines, and that, after one or more child-births, it is 17 or 18 lines broad.

The same modifications have been observed in women who indulge much in sexual intercourse. We mention the fact ; and the surgeon must take it into consideration, if he wish to avoid the risk of mistake.

It is an absolute impossibility to define the normal condition of the neck of the uterus, to describe its shape, or determine its density. Its varieties, in these respects, are so numerous, that experience alone can give the ability to judge them accurately.

In its conformation the neck is sometimes short, its lips rounded and more or less thick ; at other times, one of the two lips is much the longer, covering, as it were, the other ; this peculiarity is quite common to the anterior lip. Now, whether this developement be congenital, or the result of some morbid affection, it is not the less true that it is very often found without any morbid characters discoverable by sight or by touch ; moreover, it remains permanent.

Finally, its shape is, in some cases, that of an elongated cone, with a small round hole, as if made by a drill, in the centre of its inferior extremity, and its lips so closely united as to give one the idea of a mass of flesh perforated through its middle.

From these facts, some opinion may be formed as to the variations, in length, of the neck of the uterus. Some, says Lisfranc, we have found projecting an inch and a half into the fundus of the vagina. Consequently, the indications, grounded by obstetricians upon the gradual obliteration of the neck at different periods of pregnancy, are subject to many errors.

The cicatrices, arising from ruptures of the neck in child-birth, must not be mistaken for a pathological

effect. They are, in general, easily known by their being hard and linear, as though something thin were interposed between the edges of the united wound.

The position of the neck is rarely perpendicular to the centre of the vagina. Most commonly, it inclines either forwards or backwards, and, in the great majority of cases, in the latter direction. Is this always the sequel of a pathological condition? Certainly not, if to this deviation be joined neither tumefaction nor sensibility to pressure.

The neck is habitually thrown backwards in women who have indulged much in sexual intercourse. This disposition is owing to its being pushed, by the penis, backwards and a little upwards, so that, in coition, its anterior lip lodges in that little depression which may be observed under the glans, and in front of the frænum.

For a few days before, and during the catamenia, the orifice of the neck is ordinarily enough dilated to admit the last phalanx of the fore-finger. If healthy, its tissue is at this time smooth and polished, like the pleura. If, on the other hand, its interior be in the slightest degree rugous, if it excite the same sensation as would the mucous membrane of the stomach on being touched, there is scarcely a doubt of its being in a pathological condition.

If the neck of the uterus is dilated at other times than those mentioned, it is not, according to Hippocrates, in a healthy state; it is either already, or on the point of being, attacked by a grave affection. It is likewise dilated during hemorrhage, or the presence of

a polypus; but these affections have their peculiar diagnostic signs.

2. *Of the body of the uterus.*—Our remarks on the volume and density of the neck are strictly applicable to the body of the uterus. It is impossible to attain any precise knowledge on these points without frequent comparative examination of this organ in the adult. Experience alone can communicate that tact which will enable the practitioner to form a correct diagnosis, whenever it becomes necessary to determine its condition. Examination by *touching* may be made by the vagina, rectum, or hypogastrium, or by two of these places at the same time. In the article on *touching*, we shall enter into details relative to this manœuvre.

There are cases when the volume of the uterus increases without any morbid affection of its tissue; as, for example, in extra-uterine pregnancy. This phenomenon takes place, generally, whenever any irritation in its vicinity determines the fluids to the pelvis. When examination, therefore, discovers merely simple hypertrophy of the uterus, it is proper to ascertain whether some existing irritation in the surrounding parts has not been the occasion of this augmented vascular activity.

The volume of the uterus is also often increased, and especially when its neck is more or less diseased; but, in this case, there is a continuity of tissue. It is a self-evident fact, and merely requires to be mentioned, that a diseased point in an organ may cause tumefaction of the entire organ.

In advanced life, the size of the uterus, as a whole,

is diminished. The neck, in particular, has shrunk exceedingly, and oftentimes resembles merely a small tubercle. The vagina, which undergoes similar modifications, now contracts, and exchanges its former ample dilatation for more limited dimensions; its inner extremity forms a narrow *cul-de-sac*, terminated by the neck, in every respect resembling the anus of a chicken.

Besides this general contraction, membranous bands occasionally form in the vagina, and exclude the neck from sight and touch. Lisfranc cites two cases in which he found a circular membrane, dividing the vagina transversely, having a hole two or three lines in diameter in its centre, and situated about an inch below the neck of the uterus. This organ was diseased, and indicated its morbid condition by the signs common to all uterine affections, and by a very abundant leucorrhœal discharge. It being no less impossible to see than to *touch* the neck, Lisfranc cauterized it, at a venture, through the small opening in the membrane, and was fortunate enough to effect a cure.

Under such circumstances, it is evidently impossible to discover the particular affection of the neck, or to foresee the results of the cauterization. Notwithstanding this uncertainty, it is possible, and even a duty, to try it, with proper precautions, suspending its use, if it produce effects different from those desired.

If these bands, whether circular or lateral, still allow the neck to be reached and examined as in ordinary cases, the treatment can be conducted with confidence.

The uterus, being quite loosely suspended in the centre of the pelvis by its ligaments, is easily displaced without its ceasing to be in a healthy condition. There is a very simple method of ascertaining this mobility of the organ. Place a speculum in the vagina, and press it against the uterus just firmly enough to prevent its falling out by its own weight; then direct the patient to strain, as if she were evacuating her bowels; the instrument will be forced downwards with some violence, and the neck will occasionally descend to within an inch of the entrance of the vagina.

To prevent these repeated prolapses, therefore, which might eventually induce evil, such patients must be instructed not to strain at stool; the use of enemata is often beneficial, especially in cities, where constipation is a common evil. The uterus, it is true, generally returns to its proper situation, but sometimes, whether from an affection of its body, or of its suspensory ligaments, it does not. In inflammation of the latter, however slight, straining at stool, by forcing the uterus downward, occasions in the loins dragging pains of exquisite severity. These efforts must, therefore, be the least possible, and the irritation maintained by them will of course diminish.

Displacements of the uterus are very common, and have been described by authors as so many distinct diseases. Lisfranc regards them as a symptom merely, a result of engorgement. If, he says, the slightest traction can cause the ligaments to yield and the uterus to prolapse, in their normal condition, why should not the ligaments yield to the weight of the organ augmented by engorgement?

The height of the uterus in the pelvis, or its distance from the vulva, varies according to the stature of women, and according to the differences in length of the vagina. Generally, it is very high in the inhabitants of warm climates, and in tall women; and the contrary, in women of temperate and cold climates and in those of low stature. It is usually lower in women who have had children. Finally, the uterus is found exceedingly low in some individuals, without any cause which can possibly be assigned for its descent. These cases, however, may be distinguished from true prolapse, thus; the uterus cannot be pushed easily back, as would be the case were there relaxation of its ligaments.

The uterus may, moreover, be kept up very high in the pelvis, being wedged in by its own anormal size, by tumors in the pelvis, or by masses of hardened fæces in the rectum. In some cases, when the fæces accumulate above the uterus, and there harden, the opposite effect is produced.

We have no remark to make upon the surgical anatomy of the broad ligaments and ovaries. In speaking of *touching*, we shall merely show how easy it is to ascertain their condition.

VII. PRINCIPAL ANOMALIES OF THE GENITAL ORGANS.

It will not, perhaps, be useless to recall to the reader's mind the principal defects of conformation observed in the female organs of generation; they

might occasionally embarrass, in diagnosis, one to whom they were not familiar.

It is well known that the larger number of supposed hermaphrodites are either women whose clitoris, from its excessive developement, simulated a penis; or men, whose urethra and scrotum, being divided through their middle, represented, more or less perfectly, a vulva. At times, though rarely, certain ambiguous beings have had internal organs the sex of which it was very difficult to determine. Finally, individuals have been described with organs apparently masculine on one side, and feminine on the other, thus partaking of the conformation of both sexes.

There are quite a number of instances of double uterus; that is to say, of wombs divided through the middle, sometimes completely, but more frequently by a projection of greater or less height. Each division thus formed an *ad uterum* corresponding to each ovary. Sometimes this double body terminated in a simple neck of the normal form; sometimes a neck, divided by a longitudinal median partition, was found in the fundus of the vagina; and, in some cases, this partition extended more or less into the vagina, even to its entrance; finally, the sole mark of division consisted, as in the case observed by Dupuytren, of a simple median projection into the cavity of the uterus.

During the developement of the uterus, one of its halves may cease to grow, may atrophy, and may even be destroyed by some disease; there must, consequently, be a necessary corresponding modification in its form. The whole uterus may atrophy, and

remain of a size much less than that which it ought to have. In a young girl, sixteen years of age, who had not yet menstruated, and who had been subject, since her ninth year, to hysteric attacks, I found the uterus no larger than a middling-sized hazelnut; its cervix was not three lines in diameter. Renaudin has described a case, in which the place of the uterus was found to be supplied by a simple cord, of the size of a writing-quill.

Finally, the uterus may be entirely wanting. In this case, there is sometimes no vagina, the rudimentary labia being separated merely by a depression, of greater or less depth. At other times, the external sexual organs are well developed; and the vagina is sufficiently deep to allow copulation. Lisfranc relates a case, in which the vagina being continually pushed back by this act, gradually acquired capacity sufficient to contain a penis of moderate length, although, at first, it was not more than an inch to an inch and a half in depth. We shall revert to this fact.

In these cases, the cylindrical vagina terminates in a small *cul-de-sac*, either perfectly smooth, or else having, occasionally, on its surface a small tubercle, which would appear to be a rudiment of the uterine neck. However, it seems to be no difficult matter to ascertain congenital absence of the uterus, by *touching* from the rectum. If there be a vagina, the examiner may assist his search by *touching*, at the same time, from this organ; the finger, introduced into the rectum, will rest upon the tip of the other in the vagina. If, however, any doubt still remain, let a sound be passed into the bladder, and its point turned to-

wards the rectum; if it strike the finger in this canal, it will be positively certain that there is no intermediate organ.

The columnæ of the vagina may be multiple, and the transverse rugæ so large as to form valves, and occasionally, very troublesome partitions, either from their impeding excretion of the catamenia, the act of copulation, or certain surgical manœuvres. May not those double hymen-membranes, of which we have spoken, be accounted for by this kind of valve?

There are a few cases on record, in which the vagina opened into the rectum, and some, in which the rectum terminated in the vagina; in others, still, the vagina opened into the urethra, or even into the neck of the bladder. The vulva, in these cases, remains rudimentary, or, at times, becomes a large urethral canal, or else is entirely wanting. It may, on the other hand, appear much longer than usual, when the rectum and vagina, united, terminate in a common opening.

The anomaly in the sexual organs is sometimes limited to simple adhesion, either in whole or in part, of the internal surface of the large labia. It may be either congenital or accidental. The small labia, also, may be united isolately, and impede the flow of urine.

The clitoris may acquire an enormous size, exceeding even that of the penis. Its integuments, by exposure to the air, assume the appearance of the common skin, which adds still further to the resemblance. Its imperforation would not, strictly, be sufficient to distinguish it. Certain cases of *hypospadias*,

in connection with an empty scrotum, and with a median division simulating a kind of vulva, may support an erroneous belief in hermaphroditism; but the presence or absence of the internal organs will remove all kind of doubt.

CHAPTER II.

MODES OF EXAMINATION EMPLOYED TO ASCERTAIN THE CONDITION OF THE FEMALE GENITAL ORGANS.

It will be shown, presently, that all diseases of the uterus—however different their individual natures may be—have a community of symptoms. This circumstance renders it impossible to form an accurate diagnosis with respect to them, and, of course, to employ an appropriate mode of treatment, without having recourse to local examination, which can be made either by sight or by touch.

I. THE TOUCH.

This mode of examination in the diseases before us, is more serviceable than any other, to the physician. In general, it should be had recourse to at once. Frequently, it is sufficient, of itself, to establish the diagnosis; and if a visual examination become indispensable, the touch indicates its necessity.

The physician should be deeply impressed with the importance of this mode of examination. The touch, in fact, appreciates the situation and direction of the sexual organs; the greater or less volume, sen-

sibility, or density of the neck, and body of the uterus: the touch, again, indicates the presence, form, seat of foreign growths, and other pathological modifications, appreciable by this sense, situated upon parts accessible to examination.

But the touch, simple as it appears *à priori*, requires, however, to avoid error, to be practised according to certain rules, established by Lisfranc, and accompanied by the most minute details. We shall proceed to state them as carefully as possible.

In the first place—notwithstanding we have said that the touch was applicable to the generality of cases—there are circumstances, under which it must be postponed; as, for instance,

1. After any considerable degree of exercise.
2. After frequent sexual intercourse.
3. Several days preceding and following the menstrual epoch, and, *à fortiori*, during this evacuation.

It is evident that, in each of these conditions, the organs are more or less modified; and consequently the touch would lead to error merely, by communicating false sensations. A few days should, therefore, be allowed to elapse until the organs have resumed their habitual condition.

4. It should, also, be postponed as long as any severe pain exists; the touch irritates the patient, causes complaints, and involuntary contractions of the vagina. It is not uncommon for the patient to express displeasure at the pain which she has been made to suffer; the physician may consider himself fortunate, if she do not also complain of the roughness of his manipulation. With a patient in such a state of agitation, it is impossible to form a correct diagnosis.

In these cases, the touch should be preceded by measures calculated to calm any irritation in the organs, and, consequently, to remove the pain.

5. The genital organs of some women, especially of those who do not reside in cities, are morbidly sensitive, although in other respects perfectly healthy; and this sensitiveness is carried to such an extent, that the least touch excites a painful erethism of the nervous system, and even symptoms sufficiently severe to constitute an hysteric attack. In the hands of Lisfranc, baths, narcotized enemata, and one or more small revulsive bleedings from the arm, have succeeded in remedying this troublesome irritation.

6. In speaking of the hymen-membrane, some considerations, relative to the touch, were presented, and need not now be repeated. It is merely necessary to add that, after its incision, an examination must be deferred until cicatrization of the small wounds.

7. Finally, there are circumstances, under which the touch should be performed but once, and once only; as, for instance, when examination reveals an enormous uterus, filling the whole pelvis, covered by vegetations, fissures, and cavities filled with putrid masses, and bleeding at the slightest touch; in a word, exhibiting all the signs of incurability. In such cases, further research is forbidden; in the first place, as being useless; in the second place, as very dangerous; at this time, an examination may produce rupture, hemorrhage, or inflammation,—accidents from which death has oftentimes ensued.

These are the circumstances which, in general, contra-indicate touching. We now pass to the rules which regulate its application.

The first, and not the least, important rule, is to touch very gently, with an insinuating movement of the finger. We are, it must be remembered, acting upon organs more or less sensitive, more or less irritated; rough and incautious manipulation would increase both the pain and the inflammation.

The second precept is a consequence of the first; touch as rarely as possible, and only when necessary. At the same time, this reserve must not be carried so far as to deprive the physician of the knowledge indispensable in following the progress of the disease, and noting the changes from which new indications often arise. He must consider, carefully, the necessity of a fresh examination. This precept, of touching as rarely as possible, is supported by two reasons; the first, as has been already remarked, is the irritation, not always trifling, which it occasions. We have seen, says Lisfranc, metro-peritonitis supervene immediately after touching, and without any rupture to account for its occurrence. In fact, if no other evil consequence than pain follow, it should be avoided, unless indispensable. In the second place, many women submit, with extreme repugnance, to this mode of examination, and frequently will not consent to it, until convinced by arguments, or overcome by suffering. In the country, the difficulty is still greater.

In consulting upon a very serious case, it is necessary to guard against exhausting the patient by repeated examinations; for this reason, one physician should touch on one day, and another on the next. If it become necessary, however, under circumstances of greater urgency, to form a conclusive diagnosis, to

come to a final determination, repeated examinations — still, however, with intervals between them — are indispensable, as a second examination often shows what had failed to be discovered by the first. Finally, if the danger of the patient demand instant action, the necessary examinations should be immediately instituted, the essential point being her safety.

Immediately after touching, emollients should be employed to calm the irritation occasioned by it. Sometimes, indeed, if it rise to any height, it may be well to have recourse to small bleedings from the arm, with the intention of acting revulsively.

Having established these preliminaries, we come to the mechanical part of touching. The uterine organs may be examined by three different ways, — by the vagina, the rectum, and the hypogastrium.

1. *Vaginal touch.* — As the vagina leads directly to the neck of the uterus, a more definite knowledge of its various modifications can certainly be obtained through this than through any other channel. Moreover, the condition of the lower portion of the body of the uterus can be very well ascertained by the vaginal touch.

This mode of examination is performed with one or two fingers, and sometimes with the entire hand, introduced into the vagina.

The readiest hand, which is commonly the right hand, should be used for this purpose. But, very often, it is necessary to employ both successively. The fore-finger, both by situation and by use, is the most suitable.

In difficult cases, it is well to introduce the middle and fore-finger together, especially if it be necessary

to determine, exactly, the size of the neck, or even of the pedicle of a polypus. Sometimes, as has been observed, the entire hand may be introduced ; the vagina will dilate at other times than those of labor, sufficiently to receive it. Nevertheless, it would be very difficult, in some cases, to obtain sufficient dilatation, and, with women of a certain age, its introduction is a positive impossibility.

When practicable, it must be performed with careful slowness, according to the rules hereafter given, for the introduction of the speculum. By acting slowly, we imitate nature, which, during the passage of the fœtus, dilates these organs by degrees only. However, the difficulties of introduction once overcome, examination by the whole hand yields the most certain results.

Whether the fingers or hand be employed, they should be previously either oiled, or smeared with a very thick mucilage. Cerate is unfit for the purpose ; for if the speculum be employed after the touch, it pushes upwards the particles of this fatty substance, which were adherent to the coats of the vagina, and they, in this manner, interrupt the view. It then becomes necessary to wipe them away with a small mop ; the friction irritates the neck, injects it with blood, and renders the examination more difficult.

Butter, unless melted beforehand, leaves behind small lumps, which may be mistaken for something entirely different. These inconveniences, however, are easily avoided by the use of oil.

This unction not only facilitates the passage of the finger through the vulva, which is sometimes very

much contracted, but also favors the investigation by enabling the finger to move freely between the vaginal walls, which are in some cases dry and hot, and press against it with considerable force.

It might, besides, obviate any ill effect of acrid or virulent matters, if there should happen to be a raw surface upon the finger.

The nail should be carefully cut, in order not to injure the coats of the vagina; if recently cut, its roughness should be smoothed by a file. It should, also, be carefully freed from any irritating substance, as snuff, for instance. It is scarcely necessary to observe, that rings might bruise the tissues, and are, therefore, to be removed from the finger.

Some writers have advised the use of the middle finger, as being the longest. This superiority in length, however, is more than counterbalanced by its movements being constrained by the other fingers. We give the preference to the index, from which the other fingers must be separated, without, however, flexing them, as some advise. In fact, the last three fingers are lodged between the nates; the space between the index and middle fingers includes the perinæum, which can be pushed gently upwards, whilst the thumb rests upon the pubis, inclining a little to one side, to avoid the clitoris. In this way, the whole length of the finger is at command. Whereas, by closing the last three fingers, and sometimes adding the thumb, as Desormeaux does, their flexion forms a mass, which cannot be so nicely fitted to the perinæum. If the uterus were always within easy reach, the extension or flexion of the fingers would be but of

little consequence; but the frequent recurrence of cases, in which it is almost impossible, without any disposition of the fingers, to reach this organ, shows the deserved importance of this our method.

Generally speaking, the patient should be touched in an upright posture, and in her ordinary dress, from respect to her modesty. In this position, the uterus descends, both by its own weight, and the expulsive efforts which she is desired to make. It is well to have the back rest against a bed, or any thing else which will give support; the upper part of the body slightly inclined forwards, and the thighs sufficiently separated not to embarrass the movements of the hand. The hand of the patient may also rest upon the shoulder of the examiner, and thus diminish the chance of her being fatigued.

The examiner places himself in front, and on that side of the patient which corresponds to the hand he means to employ; that is, on her right, if he use his right hand, and *vice versa*. The fore-finger is then passed between the larger labia, which it gently and easily separates with its radial edge; its point being turned from the perinæum to the pubis, to avoid the clitoris, it enters at once into the vagina, whose direction it follows. The arm should be held in a position, intermediate between pronation and supination, so that the hand, placed edgewise, can lodge between the nates the last three fingers not in use.

In the common touch, it is always necessary, as the finger advances, to examine the vagina attentively, and throughout its whole length. For this purpose, the finger should be made to traverse it from

below upwards, executing arcs of a circle. Six years ago, we very nearly had cause to repent neglect of this precept, which we now so earnestly inculcate. We had touched a lady of St. Germain repeatedly, as did many other physicians, without discovering the presence of a polypus, as large as a walnut, seated at the middle and posterior part of the vagina.

On pressing, backwards or laterally, the vagina of lymphatic, scrofulous females, tumors produced by lymphatic ganglia, either engorged or inflamed, are occasionally felt; these give rise to symptoms analogous to those of vaginal or uterine disease. By simply knowing the fact, the error may be avoided. The examiner must, likewise, be careful not to mistake hardened masses of fæces in the rectum, for pathological tumors.

On reaching the neck of the uterus, the most common seat of pathological alterations, we must increase our attention — so as to discover satisfactorily its condition — and the delicacy of our manipulation, not to aggravate already existing disease.

The finger examines, with gentle pressure, the edges of its orifice; and also measures its dilatation which is, sometimes, so considerable as to admit the last joint of the finger. At this point, the investigation should be continued with much deliberation, to avoid the risk of laceration. In the article, *neck of the uterus*, we have mentioned the sensations which would arise from touching its interior, both in a normal and a pathological condition.

When this examination is completed, the finger is transferred to the outside of the neck, which it trav-

erses, as it did the vagina, from below upwards, describing concentric arcs of circles.

Each point of this organ is to be minutely felt, and gently pressed, to ascertain its density and its sensibility; the uterus is to be pushed upwards, to judge of its mobility and of its weight. We differ, in opinion, from the author who asserts, "that the notions, acquired from touch, of the density of the parts diseased are very uncertain; for the depression of its tissue by the finger is easily confounded with the yielding or displacement of the organ, a consequence of its mobility." We, on the contrary, do not believe that the mobility of the uterus is such, that a slight depression, made at any one point, cannot be easily distinguished from a displacement of the entire organ.

And, besides, if this were the case, the uterus can be rendered immovable, by placing one hand on the hypogastrium.

The finger has now reached the origin of the neck of the uterus; if it continue to rest upon this organ, its farther passage, and also the examination of the body of the uterus are arrested by the attachment of the vagina. Lisfranc's instructions, however, founded on the anatomical disposition of the upper part of the vagina, direct the finger to be moved, transversely, a half or whole inch, to the outside of its attachment, and its walls to be pushed upward; in the majority of cases, the vagina will yield sufficiently—even more than an inch—to allow examination of the inferior half of the uterine body. It is by means of this displacement of the vaginal walls, that the broad ligaments can be felt, stretched along each side of the

uterus. In this case, however, the rectal touch is an easier and more certain method.

If the introduction of the finger, into the vagina, is obstructed by a tumor, pass the finger carefully around it, and endeavor to reach its pedicle, if it be pendant from the neck of the uterus, by insinuating the finger between it and the vaginal walls; in short, the circumstances, connected with this foreign body, will indicate the most favorable mode of procedure.

One hand, however, is not able to explore the vagina, or the neck in their entire circumference. The pulp of the finger used can, it is true, examine properly that portion with which it is in relation, that is to say, a semi-circumference; but, in proportion as the finger departs from this limit, it touches only by its side; and on the opposite half of the circle, the nail alone is in contact with the tissues. Now, it is evident, that the exquisite sense of touch, possessed by the pulp of the finger, is entirely wanting to the nail; the arm, therefore, must make a complete rotation upon itself before the palmar face of the same finger can traverse the entire circumference: this is an impossibility; consequently, when one semi-circumference has been examined, the investigation is to be completed by the other hand.

Hitherto we have supposed the touch without difficulty, the woman being in a standing position; but all cases are not so simple as this. There are women in whom the uterus cannot be made, by the upright posture and the efforts of expulsion, to descend sufficiently to be within reach of the finger. Previously to the examination, therefore, it will have a very good

effect, to cause her to walk for an hour or two. This method has often succeeded in our hands, particularly in a patient who had a polypus attached to the neck of the uterus, the pedicle of which could not be reached by the finger without this preparation.

The height of the neck of the uterus often depends upon the developement of the large labia in fat women. In this case, it is necessary to place the patient upon an inclined plane of 30 to 35 degrees, as for the operation of lithotomy, or, which is better, upon the edge of a bed, with the legs apart, and the feet resting upon two chairs. The surgeon, placing himself between the thighs, carefully separates the large labia, in order that the hand may fall directly upon the orifice of the vagina; in this manner, he may gain even an inch. This is precisely a case in which it is necessary to slide the last three fingers, straightened out, between the nates, which may be separated, if necessary, by an assistant; and the perinæum being now reached, it also may be pushed upward a little. The tendency of the uterus to descend upon the inclined plane is increased by the expulsive efforts of the patient, and by the pressure made upon the hypogastrium by the other hand, which at the same time pushes the intestines upwards, and presses downward upon the fundus of the uterus.

Generally, whenever the touch is practised upon a recumbent patient, the pelvis must be disposed in such a manner, that the uterus may descend the utmost possible. This result is obtained, by placing it upon a plane, formed of pillows, so arranged that its lowest point may coincide with the ischiatic tuberosities;

this plane should form with the horizon an angle of from 30 to 35 degrees.

The patient may also be placed upon her side.

At times, indeed, it is useful to put her upon all fours, as, for instance, when an examination of the inferior and anterior portion of the vagina becomes necessary. If the deviation of the neck of the uterus render the touch extremely difficult and uncertain, we must vary the position of the patient, and endeavor to bring the uterus into a more favorable direction. As a general principle, the position should have a relation to the greater or less advantage expected from it in examining different regions.

The position of the physician should always be convenient; that is, the hand made use of should correspond to the side of the genital organs to be examined, and have nothing to impede its movements.

The patient, as we have said, generally stands, and the examiner places himself in front of her; sometimes, however, it may be preferable to be behind the pelvis; this location is especially important in facilitating an accurate judgment of the posterior part of the vagina.

Finally, there are cases in which the womb is immovable, and cannot be reached by the finger; the sole resource, then, is the hypogastric touch, and the use of the speculum, which is longer than the finger.

If uncertainty be felt upon any point, it is well, before withdrawing the finger from the vagina, to rectify or confirm by a second examination the results of the first.

2. *Rectal touch.* — Touch by the rectum is intend-

ed either to be a substitute for that by vagina, whenever the latter is impossible, or to contribute additional information for the completion of the diagnosis.

This mode of examination is even more unpleasant to patients than the preceding; they have a peculiar repugnance to it; and it should never be resorted to unless the data obtained by other methods are insufficient.

Touch by vagina would yield unsatisfactory information relative to tumors, developed in the recto-vaginal wall, in the broad ligaments, or in the posterior portion of the uterus. The rectum, indeed, would be the sole channel of examination, if the vagina were obliterated, or much contracted, &c.

To perform this touch, the woman is placed as before, and one or two fingers, but generally the index alone, is passed into the rectum.

In this, as in the vaginal touch, we must endeavor, in the majority of cases, to depress the uterus, so as to render the examination easier, and extend it over a larger surface: consequently, the patient is to be placed in a standing position, or upon an inclined plane, unless in those special cases in which another position would be required by some anomaly in the situation of the womb.

In these cases, moreover, it is essential to proceed very gently, especially with those in whom the anus is very sensitive; and it is well known, that the resistance of the sphincter of the anus is generally much more difficult to overcome than that of the orifice of the vagina. Peculiar delicacy of handling is required, in cases where hemorrhoids exist.

Through this channel, the finger can reach to half the height of the posterior surface of the uterus, and examine it with considerable facility. This mode of touch requires much practice; the uterus — which is felt at its inferior portion only through the interposed recto-vaginal, and superiorly through the rectal walls — appears of such an enormous size, that one, if not guarded against the error by practice upon the dead body, would be induced to believe it pathologically enlarged. Practice alone enables one to estimate it rightly.

This method of touch is principally useful in appreciating the condition of the broad ligaments. They can be felt, through the rectum, almost as plainly as if they were exposed, and much more easily than through the vagina. The ovaries even can be reached, provided they are in a state of engorgement.

Sometimes it is well to employ simultaneously the two modes of examination, by vagina and rectum; as, for example, in forming a correct judgment of disease existing in the recto-vaginal wall.

3. *Supra-pubic or hypogastric touch.* — It is, of the three, the most simple, and the information obtained by it the most indefinite. Except in pregnancy, and those rare cases in which the presence of a foreign body enlarges the uterus to a considerable size, it is evident that little value belongs to signs discoverable through the abdominal walls, sometimes loaded by fat.

Though this method of examination, when employed alone, throws little light on the diagnosis, it may, under certain circumstances, much facilitate the other modes of touch. When joined to the vaginal

touch, it presses the uterus downwards to meet the finger ; in this manner, also, the uterus may be made to oscillate from one hand to the other, and thus give quite a correct idea of its volume. The hand upon the hypogastrium, likewise, serves to steady the uterus, whilst the finger in the vagina estimates the density of its neck, and of the inferior and posterior portions of its body. Finally, in connection with the touch by rectum, it can aid in depressing the uterus, and, to a certain extent, in measuring its antero-posterior diameter.

In touching the hypogastrium, the patient usually lies upon her back, with her head raised, the thighs a little apart, and flexed upon the pelvis, for the purpose of relaxing the abdominal muscles, and the pelvis so elevated as to form a plane inclined to the horizon at an angle of from 40 to 45 degrees, of which the lowest point should be the upper extremity of the pelvis. In this position, the uterus will be brought the nearest possible to the umbilicus, and, consequently, be more accessible to examination. In this position, it is often possible to obtain correct ideas of tumors, either attached to the uterus, or existing in the abdomen, which, without it, would have gone undiscovered.

Touch, thus performed, is painful to almost every woman, even in a healthy state of the organs. Previous knowledge of this fact may prevent error in diagnosis.

The hand transversely placed above the pubis, first presses in the iliac fossæ—to ascertain whether any disease exists in the ovaries or Fallopian tubes—and then upon the middle of the hypogastrium, which is

ordinarily occupied by the fundus of the uterus. At this point, it can be felt as a globular tumor, of more or less hardness, and distinctly circumscribed. In performing this manœuvre, the hand should press from before backwards, and from above downwards, at the same time that it executes lateral movements, to crowd the intestines towards the umbilicus. It is sometimes impossible to arrive at the fundus, except by exerting quite a powerful pressure, by crowding the hypogastric walls into the pelvis with the pulp of the united fingers, the palm of the hand being turned towards the mons veneris. The pressure, whatever may be the degree of force necessary to success, must always be slow and gradual.

In those cases in which assistance is sought from touching at the same time by vagina, the finger would very often be unable to reach the neck of the uterus, in the situation of the pelvis just described, and consequently could be of no aid; the patient must be laid horizontally, and then the simultaneous examination results in an increased degree of certainty.

Whichever mode of touch may be practised, the *primæ viæ* must be previously evacuated. Distension of the bladder, or of the large intestine, would remarkably impede the touch by vagina, by pushing its walls inwardly, and might lead to error. In the rectal touch, the inconvenience is evident at once; and in the hypogastric, an accumulation of *fæces* in the rectum would conceal the objects of investigation, and if the bladder were distended by urine, it would be attended by pain, and not always be free from danger. To effect these objects, enemata and catheterism may be employed.

Touching, though apparently a simple operation, requires much practice to be executed with all the benefit desirable. We again say, that it cannot be performed with too much gentleness and too many precautions.

Here terminates the province of touch. It is evidently sufficient, as has been already said, to give a correct idea of the volume, situation, density, and sensibility of the organs; and equally sufficient in those cases of advanced disorganization, in which nothing more is needed than to ascertain their incurability. But, on the supposition of disease less serious, a simple examination by touch cannot determine the nature of many diseases, with precision sufficient to form the basis of a course of treatment upon which life is dependant. The most exquisite sense of touch cannot, for instance, discover in any commencing disease slight excoriations, or a miliary eruption. The ideas, derived from this source, would be quite insufficient, quite imperfect, if sight did not lend its aid to rectify errors, or complete the diagnosis.

II. THE SPECULUM.

In the use of this instrument, still greater respect and delicacy must characterize the conduct of the physician towards his patient, so that her modesty may be shocked as little as possible, in thus permitting organs to be seen, whose examination by touch has already cost her feelings such a sacrifice.

Nothing is easier than an examination of the external organs of generation. The simplest position

will answer ; whether the patient be in supination on the edge of a bed, her head supported by a pillow, and her feet slightly apart, resting upon two chairs ; or upon her side, the leg of the under side being parallel to the axis of her body, and the upper thigh flexed and raised ; or whether she be seated on the edge of an arm-chair or couch, the thighs separated, and the head thrown backwards. Either of these, in the generality of cases, will be equally advantageous. The surgeon, being in front, with one knee on the floor if necessary, first examines the perinæum, and the external surface of the large labia ; then separating these latter, he examines, in succession, their mucous surface, the nymphæ, the clitoris, the vestibulum, the termination of the urethral canal, the entrance and inferior portion of the vagina. The smallest folds are to be scrupulously searched, for very small ulcers are occasionally concealed within them. Some, also, may be hidden behind the transverse fold which has been pointed out as existing in the fore-part of the perinæum ; it must be turned gently outwards to discover them.

But the fingers of the physician are incompetent to examine, in the same manner, the vagina throughout its length, and the neck of the uterus. The aid of an instrument, called *speculum*, is required to separate the vaginal walls, and thus enable examination by sight to extend even to the uterus.

This instrument is one of great utility, notwithstanding the opinion of some obstetricians to the contrary, who are satisfied with the aid derived from touch. As respects myself, says Lisfranc, the touch

is not sufficient, and, more than once, assisted by the speculum, I have demonstrated diseases whose existence they had failed to discover.

Though known to the ancients, — since it is mentioned, under different names, by Paul of Ægina, Rhazes, and Albucasis, — this instrument remained for a long time disregarded. The science of modern days is greatly indebted to Recamier for again introducing it into practice.

Though its utility is oftentimes indisputable, its use is not always indicated; it would be a serious error to employ it indiscriminately. It is an unyielding, voluminous instrument; its introduction is frequently painful, and an additional cause of irritation; it is, therefore, an established principle to employ it in urgent cases only.

The remarks on the hymen-membrane, in the article on touch, apply also to the introduction of the speculum.

Mention was likewise made of certain cases, in which the sensitiveness of the vulva is such, that even the pressure of the finger will produce a high degree of nervous excitement. Here, it is still more important to calm the irritability, before making use of the speculum. Acute vaginitis, likewise, is to be previously subdued.

Finally, when excessive hypertrophy of the uterus, accompanied by sub-inflammation, exists, this operation must be postponed. As, indeed, excoriations or superficial ulcerations of its neck could neither be cauterized, nor locally treated, until the engorgement was nearly resolved, it would be useless, and might be

followed by trouble. If its introduction is prevented by tumors in the vagina, and no contra-indication exists, they are to be previously removed; if, however, they are firm, and of no great size, the speculum, on reaching their base, may be slipped over them by a slight see-saw movement.

In the surgical anatomy of the vagina, mention was made of its contraction, and of the trifling dilatibility of its orifice — which has nearly become cartilaginous — in advanced life. This contraction is, at times, so excessive, as to render it impossible to introduce the smallest-sized speculum; consequently, says Lisfranc, we have been compelled, in certain cases, to prepare the parts by dilating them for eight or ten days, with prepared sponge.

Membranous bands in the vagina, as well as a second hymen-membrane, are to be divided when satisfactorily ascertained not to be formed by the vaginal walls themselves: in the opposite case, the knife would penetrate the neighboring organs, instances of which may be found on record.

Accumulations of hardened fæces may, by pushing the recto-vaginal wall upwards, prevent the introduction of the speculum. In a recent case, Lisfranc was obliged to defer it until the rectum had been previously evacuated by the finger, enemata being of no avail, because they could not enter.

We have now reviewed the principal cases, in which the use of the speculum must either be deferred, or preceded by preparatory measures. We shall proceed to mention a few in which its use, being contra-indicated, would be followed by serious consequences.

Thus, when the neck or vagina are deeply ulcerated, it endangers laceration, and severe hemorrhage; we have ourselves witnessed an instance of the kind, in which its improper introduction occasioned terrible laceration of the vagina, irrestrainable hemorrhage, and death in two hours afterwards.

When vegetations, or a voluminous mushroom-excrecence, exist upon the neck, the speculum is useless; it cannot inclose them. Moreover, the least touch generally produces such a flow of blood, as entirely excludes the parts from sight. Finally, the uterus is occasionally found at the vulva; in these cases, by simply separating the large and small labia, the neck becomes visible.

No mention will be made of those deformities of the pelvis which would prevent the introduction of the speculum; it is evident that it cannot be used.

The speculum has undergone numerous and, frequently, useless modifications. The one, says Lisfranc, which we use exclusively in common cases, is the pewter-tube — of a slightly conical shape — of Recamier. It is denominated the whole *speculum*. We have, however, increased its length to seven inches, instead of reducing it, as has been done, to five inches. This latter length cannot reach the uterine neck of many women; of course, it becomes necessary to introduce a second instrument, a repetition of the operation much better avoided. The depth of the vagina has been shown to vary much. It is, therefore, very reasonable to have a speculum, which, as far as its length is concerned, is suited to every case, as the operator can always stop its farther introduction when

it has reached the uterus. The speculum is also made of different diameters, designated by the Nos. 1, 2, 3. These different diameters, however, are indispensable, the amplitude and dilatability of the vagina not being the same at different ages of life, nor with every individual.

Instead of the handle, four inches long, which the speculum had previously to the present day, one, fifteen lines in length, has been substituted, and is sufficient for its management, besides rendering it more portable. To gain this latter advantage, it has been proposed to make a joint in the former handle, and fold it back, by means of a hinge, upon the body of the instrument. But, we would ask, what is the use of this long and powerful lever, in acting upon organs which require the utmost gentleness of handling? Why be troubled by an useless contrivance?

Dubois has proposed to cut away the anterior portion of its superior wall, and make use of it in the treatment of vesico-vaginal fistulas.

Introduction of the speculum.—Of this practical point, which, in our opinion, is more difficult than it is generally supposed, nothing is said by the greater number of authors, and the instructions given by those who have treated of it are very imperfect. We shall have no fear of entering into the minutest details, being well convinced that such a course will be extremely useful to the young physician.

If the first precept of touching be, to act with slowness, and the utmost delicacy, still more strongly does it apply to the introduction of the speculum. Instead of a supple and small-sized finger, a hard, inflexible,

metallic body, of a much greater volume, is substituted.

The instrument is to be oiled — the disadvantage of concrete, fatty bodies have been stated — and in winter pleasantly warmed; it is sufficient to hold it for a few moments in the hands. The coldness of the metal would act unfavorably upon the genital organs, would occasion contraction of the vagina, and might give rise to serious accidents. We have seen it determine very painful colic and almost all the precursors of peritonis, in cases in which the use of the instrument was neither contra-indicated, nor presented any difficulty.

It is now easy to understand the manual of the operation. The patient is placed transversely upon a bed, the tuberosities of the ischium being on a line with its edge, the feet resting upon two chairs, the thighs sufficiently apart to allow room for the surgeon between them, the head supported by a pillow; if the edge of the bed should sink under the weight of the pelvis, another pillow beneath it would secure the trunk of the body in a horizontal position. The feet rest upon two chairs, or two assistants support them, in order that the perinæum and large labia may not be thrown into a state of tension. The thighs are moderately separated, that is to say, to such an extent as to form, with a line perpendicular to the pelvis, an angle one half less than that which would be formed by their utmost separation.

The touch is previously practised, in order to ascertain the situation of the neck, and consequently be enabled to direct the speculum towards it with more

certainly. Without this preparatory examination, there is risk of pushing it in a wrong direction, and of being forced, for the purpose of finding the neck, to move it about, and thus to irritate the uterus. In the second place, the touch partially reveals the morbid changes of the neck, especially in its size; this knowledge is necessary to the selection of a speculum. In the choice of an instrument, attention should also be paid to those changes in the size and dilatability of the vaginal orifice which we have seen impressed upon it by age.

An assistant is directed to open the vulva, if necessary, but in ordinary cases the operator had better do it himself; then with the left hand—its palmar surface being turned towards the perinæum—the hair is put aside, and the labia separated at their middle; with the right he grasps the speculum, by placing the index and middle fingers in the concavity of the handle, whilst the thumb is pressed upon the junction of the handle with the body of the instrument. It is then presented to the vulva, its handle being turned towards the mons veneris to be entirely out of the way, and with its centre corresponding perfectly to the centre of the vagina, pushed forwards on a line which, if extended from the vaginal orifice, would strike the inferior part of the coecyx. Having penetrated an inch, the instrument makes a see-saw movement, which brings it into the direction of the sacro-vertebral angle.¹

¹ The most usual cause of the pain occasioned by the introduction of the speculum is the dragging and pinching of the urethra. This is avoided by holding it in a line perpendicular to the extremity of the coecyx, and then directing downwards the superior edge of its extremity. Passing the hand to the lower part of the larger labia, which it

Its introduction is to be made with much slowness and caution. Frequently, it is useful to turn the speculum gently upon its own axis, introducing it corkscrew-wise, or to move it slightly from side to side. The patient is requested to abstain, as much as possible, from all efforts of expulsion. If the perinæum should happen to be broad, with its anterior edge forming a strong, and very prominent transverse fold, it must be drawn carefully backwards, to prevent the posterior edge of the instrument striking against it, and forcing it inwards, thereby occasioning pain, and preventing its own introduction. If the passage of the vulva presents any greater difficulties than these, the speculum may be furnished with the improvement of Melier, by which its introduction is remarkably facilitated. It consists of a solid cylinder, with a rounded extremity, which is introduced into the speculum, and projects beyond it.

In the section on the surgical anatomy of the genital organs it was stated, that the enlargement of the orifice of the vagina, during the introduction of the speculum, was principally effected by the obliteration of the large labia. Therefore the hand, whether of an assistant or of the surgeon himself, which is employed in separating them when the instrument is presented at the vulva, must relinquish its hold as soon as its introduction commences; otherwise it would drag upon the parts, and its passage be much less easy

separates all the while, and drawing the perinæum backwards, the instrument is brought into a line which, if extended, would strike the sacro-coccygeal articulation. Thus the perinæum is saved from pulling, and the centre of the instrument corresponds to the centre of the vagina.

through the vagina, deprived of this means of dilatation.

In proportion as the speculum penetrates, the patient involuntarily strains. The vagina resists, presses upon the speculum, and presents at its extremity a rosette with a central opening, the circumference of which is formed by the contraction of the vaginal walls, whose whole extent is thus shown, perpendicularly, to the observer, in proportion as the advance of the speculum unfolds them. This rosette, it has been said, has a hole in its centre, which is the case when the neck occupies the centre of the vagina; but if it incline to either side, the orifice generally follows the same direction, and is nearer to the circumference of the rosette. The larger segment of the vagina is, ordinarily, diametrically opposite to the side towards which the neck deviates; hence a very good explanation of the tension on one side, and relaxation on the other, of the vaginal walls, occasioned by its new direction. This peculiarity may indicate to a certain degree — when no previous examination has been made — the direction of the neck of the uterus.

It is consequently quite easy to discover any disease of the walls of the vagina, because their whole extent is successively displayed upon a plane, perpendicular to the extremity of the speculum. We thus see the uselessness, in most cases, of those instruments, from one side of which a piece has been removed, for the purpose of accomplishing the same object. They are, besides, very disadvantageous, because this lateral opening permits oblique examination only.

The great resemblance of the rosette, just described,

to the neck might occasion error. We have, indeed, heard one physician say that a cervix could be made at will. Perhaps he spoke the truth relatively to himself, says Lisfranc, but to us it exhibits characters so decisive, as to leave no room for doubt. In the first place, the neck is not rugous, like the vagina; moreover, its color is different. When inflamed, its color is darker than that of the vagina, whilst on the contrary, in its healthy state, its mucous membrane is even paler than that of the vagina. Finally, to remove all uncertainty, push the presenting part gently with a slender rod, having a rounded extremity; if it be the vagina, the slightest effort displaces it.

When the instrument has nearly reached the uterus, the walls of the vagina oftentimes suddenly separate, and leave the neck visible at its extremity; if the size of the organ will permit, it should be received within the hollow of the speculum.

The neck sometimes inclines so much backwards, especially with those who have indulged much in sexual intercourse, that only its anterior surface is visible. In this case, the speculum must be withdrawn about an inch, and, its handle being carried upwards and forwards, its other extremity must be directed between the posterior wall of the vagina and the neck, so as to raise and bring the latter forwards.¹ The

¹ In this manœuvre, the pressure, which the point of the speculum makes upon the middle of the recto-vaginal partition in endeavoring to get behind the neck, often produces quite severe suffering. The same result is obtained, with more facility and less pain, by directing the extremity of the instrument steadily backwards, but to the right, or sometimes to the left; ordinarily there is nothing to prevent the vagina from giving way laterally, and thus the speculum is easily lodged be-

speculum is then gradually carried into its former direction, and the tendency of the neck to resume the position from which it has been forced exhibits its entire surface, point by point, from behind forwards; as soon as it reached a suitable position, slight pressure fixes it there. When the neck is too large to be seen in all its dimensions at one view, all its surfaces may be successively exposed by moving the extremity of the instrument in this manner from one side to the other; by a slight inclination of the instrument in different directions, its whole extent may thus be examined. Finally, the neck is occasionally difficult to get at fairly, even though not inclined backwards; by withdrawing the speculum, as directed above, and requesting the patient to strain a little, it will oftentimes come of itself into view. However, these manœuvres require total insensibility of the neck; otherwise, they are not without danger; they ought even to be abandoned, if the uterus is so firmly fixed in the pelvis as not to be displaced without violence.

The speculum being rightly placed, and retained by gentle pressure, a small mop is carried into its interior, for the purpose of wiping the parts. The neck, even in its healthy state, is almost always covered by a

hind and beside the neck, which is then raised, as described above, by turning the point of the instrument in just the contrary direction. If it be necessary to pass the speculum directly behind the neck, after it has once begun to deviate, a slight motion laterally is sufficient for the purpose; and it is done, moreover, without making any pressure upon the rectum.

Mad. Boivin has invented an instrument for the purpose of drawing the neck in front. It is formed of a metallic rod, curved like an S, and having at each extremity a perforated spoon, a sort of ring, by which the os tincæ is to be encircled, grasped, and drawn forwards.

coating of mucus of greater or less thickness, which occasionally masks small ulcers. Sometimes, when the lips of the os tincæ are soft and hypertrophied, the closeness with which they meet conceals from sight ulcers on their internal surface; they may be seen by raising the anterior lip with a probe or any other instrument, having a rounded extremity. This simple manœuvre often discloses ulcers which are making their way from within outwards, or else small tumors in this situation; the latter are nothing more than cellulo-vascular polypi.

If the light of day—and, in general, it gives a more correct idea of the color of the tissues—be employed in making this examination, the patient is to be placed fronting a window; the operator directs the rays to the inner extremity of the instrument, obstructing their passage as little as possible by his own person. If artificial light be used, a candle is held on the left side by an assistant, or else by the left hand of the examiner, who then illuminates every part of the vagina successively, as he examines it.

Lisfranc also employs a speculum with two branches or blades, the *jointed* speculum, called the speculum of Lisfranc. The handle is composed of two pieces jointed together, and is longer than in the common speculum, for the purpose of opening the blades. Mad. Boivin has substituted for this double handle a slider, which certainly makes the instrument more portable; but then it is doubtful whether it is so easy to manage. As the blades, when closed, form an instrument of less volume than the *whole* speculum, its introduction has been deemed easier, and it has been proposed to

employ it in all cases whatever. We are, says Lisfranc, of the opposite opinion; its introduction is in truth easy; but the opening of the blades, being made in the interior of the vagina, dilates it from within outwards, so that the large labia cannot contribute to its dilatation, and painful extension is the result. Moreover, when the blades open, a space of greater or less width is left between them, into which the walls of the vagina crowd, and in this manner impede the view, unless the dilatation be carried extremely far, and then it might be followed by unpleasant consequences. Finally, in spite of every precaution, and the most perfect familiarity with its use, the branches, in closing, will often pinch the vaginal mucous membrane; this inconvenience, however, might always be avoided by withdrawing the instrument opened, which is a manœuvre of no easy accomplishment. In short, we employ the jointed speculum only when great dilatation at the upper part of the vagina is required; as, for instance, to fix the hooks upon the cervix, preparatory to its amputation, and to be enabled to withdraw it without deranging them. These cases excepted, the simple tube is always the more convenient instrument; it is more manageable in the interior of the vagina; and in cauterization of the neck of the uterus, it protects the walls of the vagina from the action of the caustic.

It has been stated that, when natural light was not sufficiently strong to illuminate the fundus of the vagina, a common candle might be substituted. It has been proposed by Colombat to concentrate the rays of light in the speculum, by means of a concave

mirror. A more complicated apparatus still has been described by another surgeon. It consists of a conical mirror, having at its top an aperture through which to look, and reflecting the light of two candles at its base. A simple silver spoon will answer as a substitute for all this parade of apparatus, even allowing its utility. To detail all the modifications, which the speculum has received from the fertile genius of the improvers of instruments, would add to the size only of the work; and he who encumbers himself with them will need an arsenal for their accommodation.

PART II.

CHAPTER I.

DISEASES OF THE UTERUS GENERALLY.

DISEASES of the uterus are connected together by so many common characteristics, either of symptoms or causes, or means of treatment, that we consider it indispensable — to avoid repetition — to treat of them at first collectively, to sketch a general outline, which we shall hereafter fill up, delineating and distinguishing each particular affection by its appropriate local signs.

In this second part, we shall treat, — 1. of the pathological anatomy of the uterus observed upon the dead body; 2. of the principal causes of uterine affections; 3. of their symptoms and progress generally, and of their prognosis; 4. of their general treatment; 5. of the selection of remedial means, and their mode of employment; 6. of diseases which may complicate affections of the uterus in their different stages.

I. PATHOLOGICAL ANATOMY OF THE UTERUS.

In these general remarks, we do not intend to give a complete and detailed description of all the morbid

changes, consequent to inflammation, which the uterus may undergo ; we merely mean to sketch, with a rapid hand, some of the phenomena which are of most frequent occurrence, and which, being the basis whereon the diagnosis and treatment are established, ought to be studied with the greatest attention.

The uterus of nubile women is, each month, the seat of a physiological hypertrophy, which disappears of itself without leaving any ill consequences. If it be attentively examined in those who have died suddenly during the catamenia, and when unaffected by any previous pathological alteration, its physical conditions are found exactly analogous to those of simple hypertrophy without transformation of tissue. Its color is the same as in its normal state, but its tissue is firmer, cries beneath the scalpel, and, when the edges of an incision are pressed, little drops of a sanguinolent liquid ooze therefrom.

The tissue of the uterus, in those who have died of acute metritis, is of a brownish red, turgid, softened, and easily crushed beneath the finger. A purulent serum, mingled with blood, may be forced from its divided surfaces. Here and there are small purulent accumulations ; occasionally, the pus is collected in larger masses ; the sinuses are filled with it ; it may be traced in the veins to the large trunks, and sometimes even to the heart.

In hypertrophy with white engorgement, the neck of the uterus is generally larger than in simple hypertrophy. Its tissue is much whiter, and of a firmness which may be compared to that of cod's liver. When incisions are made into a neck of this kind, pressure

forces from their surface a white, milky, coagulable fluid, miscible with water, and in every respect resembling that which, by its organization, forms the false membranes on the pleura. When the entire uterus is involved in this kind of hypertrophy, its volume is manifestly increased, and this same result follows, in whatever point its parenchyma may be incised.

Most of the characters which have just been enumerated belong in a more marked degree to scirrhus. This tumor affects a roundish, conoid form ; its surface is sometimes smooth, but more frequently knobbed. On being incised in different directions, its tissue is found hard, not easily divided, whitish, sometimes reddish, and traversed by a few capillary vessels. At times, a substance is found, — contained in adventitious fibrous cells, — more or less transparent, and of a color which varies in different specimens ; its appearance is shining, and its density ranges from the consistency of lard to that of potato (Zang. *Solaniform degeneration*¹) or cartilage (*Cartilaginous degeneration*, Recamier.) This is the true scirrhus tissue.

It is not rare to find in the same tumor a substance of less hardness, its color a dirty white, opaque, or shading upon yellow, sometimes milky, with prismatic, blue reflections, and resembling the substance named

¹ This word will be used throughout in the precise sense in which it is understood by the French pathologists, viz. the change of the healthy structure or organ into one essentially morbid ; such are cancerous, tuberculous, melanotic degenerations. Degeneration differs from transformation ; in the latter, the morbid change is to a tissue which naturally exists in the system, as into bone or cartilage. TR.

by mineralogists *opaline siliceous sinter*, or *Cacholong*. This anormal tissue is divided into lobules of different sizes, separated from each other by thin cellular partitions, which are traversed in every direction by capillary blood-vessels ; this is the encephaloid tissue.

Scirrhus may be seated in the cervix, the body, and the appendages of the uterus. It almost always begins in, and for an uncertain period is confined to, the cervix, of which the whole, or a portion only, may be affected.

Ramollissement is a condition directly the reverse of these different uterine alterations. It occurs, though quite rarely, in chronic inflammation of the uterus, unattended by ulceration. Nevertheless, it sometimes exists isolately ; in this case, the sensation from touching the uterus is like that from a fine sponge, moderately filled with water. When the disease has reached its maximum, the walls of the uterus are so soft, that slight pressure carries the finger through them. In a woman who had died suddenly from an irrepressible metrorrhagy, the whole uterus was found converted into an erectile vascular tissue, having all the characters of fungus hematodes, or the degeneration named by Burns *spongoid inflammation*.

Ulcers of the uterus may assume every form, from mucous to carcinomatous ulceration. Ulceration of its mucous membrane differs in no respect from that of the large labia, the glans penis, and the circumference of the anus. The ulcers may be seated upon a healthy structure, or upon organs affected by different degrees of hypertrophy, or scirrhus ; they may become carcinomatous, and with a facility proportioned to the de-

parture of the tissue, whereon they are seated, from its healthy condition. When an ulcer has penetrated deeply into the neck, without having been preceded either by scirrhus or encephaloid degeneration, must it not be considered solely as a degenerated simple ulcer? In this case, the disease is seated in a black, soft tissue, which Boer has designated by the name *partial putrescence*. This form of ulceration may attack the entire neck, and a part of the body of the uterus, or may be limited to a few lines only of extent. A perfectly healthy structure may be found below it. Lisfranc and Andral mention numerous instances of the kind.

In most of the varieties of ulcerated cancer of the uterus, the disease is, in general, only consecutive to different morbid changes of the tissues. It may be confined to the neck alone, the body of the uterus remaining perfectly healthy, or this latter part, especially on its inner surface, is likewise affected. The disease rarely commences, isolately, in the body of the uterus; still there are cases on record in which the uterus was degenerated, without any discoverable diseased point on the neck. It sometimes attacks the cellular tissue which unites the uterus to the rectum and the bladder, insomuch that a healthy uterus is found impacted in a mass of scirrhus or encephaloid tissues. Carron du Villards met with an instance of the kind in the wife of an aid-de-camp of General Mouthon Duverney. The cerebriform mass was as large as a 36 lb. shot, and its upper portion consisted of a cyst holding 15 or 20 pints of fluid. The disease had been regarded by himself, and also by Picquet of

Lyons as dropsy of the ovary, and, as such, had been many times emptied by the trocar. Of whatever nature or size an encephaloid or hematodes tumor may be, it cannot exist for any length of time without occasioning serious symptoms, and disorders which terminate rapidly in death.

With fibrous tumors, on the other hand, the reverse is the case. When once their progress has been arrested by any cause whatever, they may continue for years, notwithstanding their occasionally enormous volume, without giving rise to any serious symptoms. In their structure, they resemble tumors of the same nature in other parts of the body ; generally, the only distinguishing difference is that of their color, of which there are four principal shades, — reddish, white, yellowish, and pearly blueish-gray.

The size of the tumors varies. Some are larger than the head of a fœtus, and, according to their locality, occasion different consecutive symptoms ; others are scarcely as large as peas ; and others resemble a cock's comb, and are easily distinguished by rectal or vaginal touch. Their seat is the parenchyma of the uterus, from which they project more frequently towards its cavity than towards its external surface.

Between the lips of the os tincæ, on the inner surface of the neck, and, more rarely, on the inferior portion of the cavity of the uterus, bodies of small size are also found, either single or multiple, resembling granulations, sometimes immovable, with a broad base, but more frequently attached by a pedicle, of greater or less length. These small bodies have very minute blood-vessels, are soft, rose-colored, and invested by a kind of mucous membrane. Their interior is formed

of a loose cellular tissue, filled with serum. They have been designated by the name *cellulo-vascular polypi*. They are very often accompanied by hypertrophy and œdema of the neck, and by engorgement of the uterus itself.

Tuberculous matter is found quite often in the parenchyma of the uterus, but more frequently in its neck than in its body. Though this pathological fact has been denied by many physicians, it is fully admitted by Lisfranc. He has frequently met with tubercles in a state of suppuration; and we shall hereafter quote a case demonstrative of this morbid alteration. Tubercles are rarely found on the internal portion of the parenchyma of the uterus; when seated on its body, they are almost immediately beneath its peritoneal coat; so on the neck, they are situated directly under the membrane which invests it and its uterine orifice.

As their developement proceeds, they gradually encroach upon the parenchyma of the uterus, and hollow it out as they do the testicle, when seated in this organ. If an opening is made into their integuments when they are about to soften, they are easily squeezed out, and leave behind them a small, cup-shaped cavity in the parenchyma of the uterus. The parenchyma itself is not diseased, but has been absorbed by the presence and pressure of the tuberculous matter.

When inflammation of the uterus has been inefficiently treated, or has resisted the most active treatment, false membranes form either externally or internally. They are of even more frequent formation on the peritoneal lining of the uterus, its appendages,

and the great cavity which lies between the uterus and the rectum, than upon the pleura. They effect adhesion between different portions of the uterus, or of the uterus and its appendages with various parts of the abdomen which have a peritoneal coat. These adhesions are oftentimes the chief cause of obliquity of the uterus; and they may in this way not only prevent impregnation, but also frustrate all attempts to draw the uterus downwards, in performing different operations.

Accidental membranes formed in the cavity of the uterus are of different appearances. Sometimes they line its whole interior, and, in virgins, even resemble the decidua membrane; sometimes they are fringed, fluctuant, or adherent in different points, like the digitated madrepores. These alterations have been denominated, by the English pathologists, *cauliflower excrescence*. (*Transactions of the Society for the Improvement of Medical Knowledge*, 1812. London.) These different accidental productions may close the Fallopian tubes, and also the orifice of the uterus, and thus become physical obstacles to fecundation. The alterations just mentioned may exist simultaneously, or isolately, in the vagina, and there produce the same effects.

The Fallopian tubes may participate in all the diseases common to the uterus, in whose condition they are, generally speaking, involved. Their principal affections are,—1. entire or partial obliteration; 2. collections within their cavity of serous, purulent, tuberculous, cerebriform, or sanguinolent matter; 3. adhesions to the uterus itself, the ovaries, and the walls

of the abdomen. In the last event, an abscess, formed in the cavity of the Fallopian tube, has been known to open for itself a passage through the parietes of the abdomen.

The remarks just made are equally applicable to diseases of the ovaries ; with the exception that these latter are more subject to dropsy and cerebriform degeneration. Sometimes the fluid is contained only in a very thin, serous cyst, transparent, and varying from the normal size of the organ to the most extraordinary dimensions ; sometimes the cyst is of a fibrous character, and covered by a net-work of varicose veins, which would make an opening into it very dangerous. Carron du Villards saw an ovary as large as the head of a child four years old ; it was entirely composed of cerebriform tissue, and was traversed in all directions by very large veins. We shall make no mention here, of numberless diseases affecting the ovaries ; the larger portion of them often proceed from some accident that occurred either during gestation or parturition.

II. PRINCIPAL CAUSES OF UTERINE DISEASE.

Affections of the uterus may occur in virgins, in pregnant, or unimpregnated women, and particularly after child-birth. In the earlier periods of life, the uterus, being small and exercising scarcely any influence over the different organs of the system, is but little exposed to the numerous affections by which it is at a later period — when puberty impresses upon it an activity hitherto unknown — quite frequently attacked. Pathological alterations of the uterus, however, though rare

before the period of menstruation, are not unexampled. Lisfranc says, that he has had many patients who dated their sufferings from a time long antecedent to this epoch. He attended a lawyer's wife, the commencement of whose illness had preceded the appearance of the catamenia. She complained of pain in the kidneys, and a constant sense of weight and pain in the pelvis; she was supposed to be suffering under gastro-enteritis; but Lisfranc attributed the symptoms to a cause altogether different. Examination discovered sub-inflammatory engorgement of the uterus; it was treated accordingly; and the patient soon became much better, and, at the present date, her health is nearly perfect. Carron du Villards found a polypus, with engorgement of the body of the uterus, in a child seven years of age.

But puberty arrives with its numerous revolutions in the system. The organs of generation, — starting from the inertness in which they had lain apparently forgotten by nature, — become, henceforth, a sympathetic centre, whose radiations extend to, and are felt by, all the organs and their functions, and by which they in their turn are reciprocally impressed. The parenchyma of the uterus now become extensible, and permeable, admits into its vessels the blood with which the menstrual *effort* congests its tissue, and suffers it to transude. This state of congestion soon disappears of itself, again to return at monthly intervals. But, either from internal or external causes, it may persist in a greater or less degree, and be the origin of a congestive engorgement of the uterus, which each monthly period increases. Whatever opposes

the free flow of the catamenia tends to produce this effect.

Among the exciting causes of uterine disease in young girls may, therefore, be enumerated, chill of the extremities during or after violent exercise; the application of refrigerants to the thighs, to arrest a troublesome hemorrhage; sitting upon a cold substance, as a stone bench or a damp meadow; cold water to the vulva immediately after or during the menstrual evacuation; violent emmenagogues; the immoderate use of cream or water-ices at balls; and especially a life of chastity.

It has been asserted by one writer, (Virey, *De la Femme*,) that the condition of the virgin, in our social institutions, is a state of coercion upon the impulses of nature, and totally different from the freedom of young females among animals, which, in the season of heat, seek the gratification of their sexual propensities. The young virgin, on the other hand, is often reduced to a state of suffering and unhappiness; in warm climates, especially, where women are so susceptible of impressions, so passionate, the constitution feels deeply the privation of an act on which so many functions depend.

In cities, especially among those classes in which an abundant nutriment, indolence, and luxury fill the minds of young virgins with images of pleasure and voluptuousness, a compulsory continence often determines a state of excitement and turgescence of the uterine system, the least unfavorable consequence of which is inflammation. These phenomena are generally in direct proportion to the vigor, vivacity,

and amateness of the temperament. When — after a puberty passed amid struggles of this kind — the critical age arrives at which the menstrual evacuation ceases, and the uterus has not fulfilled its destined function, the desires, the passions still retain their fire, and keep the uterus in a constant state of irritation, of which a quite frequent result is chronic inflammation; this, in its turn, may induce the different pathological alterations lately described. It is stated by physicians attached to religious communities dwelling in cloisters, that they are remarkably subject to uterine affections, of which a melancholy picture, drawn long since by Roderic a Fonseca, may be found in his work, — *De morbis Virginum qui intra clausuram curari requeunt*.

But, oftentimes, neither the vigilant superintendence of a careful mother, nor the discipline of the cloister, can prevent the young girl from indulging in secret practices. The repetition of this illicit gratification, far from calming desire, does but add to its violence, and fearfully undermines the constitution, which each day finds more feeble. Every writer upon masturbation agrees in regarding it as a frequent cause of uterine irritation, hemorrhage, and leucorrhœa.

If affections of the genital organs of girls, belonging to the wealthier classes of society in cities, are occasioned by ease, succulent food, and the enjoyments of luxury, in the country they spring from causes diametrically the reverse. Here, in marshy districts and situations constantly exposed to atmospheric vicissitudes, such as the mountains of Auvergne, of the Vosges, of the upper and lower Alps, &c., a dark and

damp cottage is the sole shelter of the young maiden, whose nutriment is insufficient in quantity, and coarse in quality. From these hygienic conditions there arises a peculiar tendency to uterine disease, especially at the developement of puberty. But in this case it is accompanied by all the characters of anemia, by debility more or less intense, expressed by the chlorotic countenance. These symptoms are most commonly attributed by Lisfranc to chronic inflammation or engorgement of the uterus.

In populous and manufacturing cities, such as Paris, Lyons, Saint Quentin, &c., the young girls of the working class—who are employed at a very early age in manual and sedentary labor, in low and damp work-shops—are subject to exactly the same symptoms as the inhabitants of marshy districts. At Lyons, in particular, a very large number of chlorotics may be found among the silk-workers.

These causes, with the exception of local violence, and the sudden transition from an elevated to a low temperature, generally excite only chronic and latent inflammation.

These same causes exert a similar influence upon women who have had sexual intercourse. There are some causes, however, peculiar to their condition, and which impress upon the disease a new character, or, at least, generally cause its situation to vary. Thus, in the maiden, the affection is ordinarily seated in the body of the uterus, whilst, in those who have had sexual communication, it more frequently commences in the neck. This circumstance may be ascribed to the influence of a direct cause, to the action of a foreign body striking against and contusing the neck. All

the symptoms are, therefore, the frequent consequence of abuse of coition, especially if the woman is of an excitable temperament; and more particularly if a great disproportion exists in the genital organs of the two individuals; or if the uterus is lower than normal. Now as it is a law of general pathology, that the fatigue of an organ is in proportion to its exercise, nothing is more common than irritation of the uterus in young, newly-married women. This is the probable cause of the frequency with which abortion takes place among those of an ardent and passionate temperament. Moreover, we have invariably observed the larger number of these affections, especially at their commencement, between the ages of twenty and thirty.

Besides its mechanical action, coition may also occasion affections of a special character. It may deposit the syphilitic virus directly upon the neck, or, which is the more common case, expose it to a consecutive affection, the disease attacking at first only the external organs of generation.

The greater number of organic alterations of the uterus may be ascribed, principally, to the consequences of child-birth. We have known fifteen out of twenty patients date the commencement of their sufferings from this epoch of their life. The neck, in particular, is exposed to violence; thus its sudden dilatation by a rapid labor, or by imprudent manipulation, by the introduction of instruments, or of the hand to turn or to separate the placenta, bruises and lacerates its thinned edges. As for the body of the uterus, it is specially irritated by the forcible contractions of its walls upon the fœtus during a long labor

and after the discharge of the liquor amnios ; by traction upon the placenta previously to its separation, and by attempts to separate it when adherent ; and by stimulants to excite contraction of its walls. The retention of a portion of the after-birth, in the cavity of the uterus, very often gives rise to acute, and even to chronic metritis. (*Mauricau, Bonet, Morgagni.*) To these causes may be added the presence of polypi, and attempts to tie or extirpate them.

The following remarkable case of retention in the uterus of a portion of the after-birth occurred in the practice of Lisfranc. Madam B—24 years of age, had been attended in her confinement by J. Hatin. For the first few days afterwards, every thing proceeded favorably ; but, when the lochia lost its red color, a fetid, ill-looking discharge, accompanied by slow fever and slight, occasional hemorrhage, commenced. This state of things lasted for six weeks, during which the patient visibly wasted. Lisfranc was called into consultation, and, on examination, discovered a fungous substance imprisoned in the neck of the uterus, which was slightly opened. He supposed it to be a polypus ; and, as the danger was urgent, proposed its immediate extraction. The operation was performed the next day in presence of Bouillaud, Hatin, Carron du Villards, and Bergue. The patient having been placed in a suitable position, Lisfranc made repeated attempts to seize the fungus with the forceps of Museux, but they tore away each time with extreme facility. Frustrated in these attempts, he placed the hooks upon the left external surface of the os tincæ, and easily drew down the uterus. He was then enabled, by

means of the double canula of Levret, to pass a metallic thread around the tumor, and strangle it, at the same time saying, "if Madam B— had been delivered by an accoucheur less skilful than Hatin, I should think it nothing more than a piece of placenta." The hemorrhage stopped instantly, and two days afterwards the tumor came away. We have been assured, by one of those who were present and examined it with much care, that it was merely a fragment of the placenta which had been retained by adhesions. From the time of its separation, all the adynamic symptoms disappeared, as if by enchantment.

Abortion, in particular, has been designated as a frequent and even as a formidable cause of organic affections of the uterus. To what is its occurrence to be ascribed? To a diseased state of the uterus antecedent to fecundation, and aggravated by the exertion of expelling the fœtus; or to criminal acts; or to the abuse of purgatives employed with criminal intent? Or is the engorgement which it leaves behind greater, and more difficult of removal, than that succeeding child-birth at term; or does the neck, being at this stage thicker and less dilated, suffer more violence in giving the infant passage, notwithstanding its smaller size? Whichever may be the reason, it is a fact, that a goodly number of those affected by cancer of the uterus have aborted one or more times.

Finally, the critical age becomes a new source of uterine affections. The monthly determination to the uterus—instead of diminishing gradually in proportion as the tissue of this organ, whose functions have ceased, becomes more compact and consequently less

permicable — continues, and creates disorder, because the evacuation of blood, which previously prevented congestion of the pelvic organs, has stopped. At other times, the structure of the uterus loses its tone, and, like a sponge, becomes saturated by the blood which traverses it. Hemorrhages, occasioned in this manner, are a frequent cause of organic alterations, oftentimes of a grave character. Such are nearly the principal causes of diseases inseparable from the very constitution of woman.

Furthermore, both ancient and modern authors agree in considering suppression of an habitual hemorrhage from the nose, or from hemorrhoidal tumors, repulsion of the exanthemata, stoppage of the lochia, drying up of the milk, &c., &c., as recognized causes of metritis.

The use of foot-stoves was long ago condemned by Roderic a Castro. Coffee and milk, as a beverage, excites leucorrhœa in many women. Some physicians are of the opinion, that cosmetic and astringent lotions are more than sufficient to cause inflammation of the sexual organs.

Mental affections are not the least frequent cause of the diseases which now occupy our attention. The life of woman, in cities particularly, is a constant succession of varied emotions. Possessed of quick sensibility, oftentimes susceptible in the extreme, she is placed in moral conditions of such a nature that her feelings are continually exposed to violent agitation, and her health, consequently, to serious injuries. Thus it is, that some sorrowful emotion, as the death of a dearly-cherished friend, love thwarted or grossly outraged, jealousy, the loss of property,

frequently impairs the female constitution, gives it a shock whose action usually falls upon the uterus and its functions. We see instances daily, in which strong emotion has either suddenly suppressed the menstrual evacuation, or else modified its course ; has either occasioned, or immediately arrested, an uterine hemorrhage.

Hereditary predisposition comes to swell the list of causes. The daughter often receives from her mother an extreme susceptibility to uterine affections. This fatal inheritance extends even to the gravest diseases of the uterus, such as scirrhus and cancer, as the works of Bayle and the observations of Lisfranc attest. The latter was acquainted with a family consisting of seven daughters, whose mother died of cancer of the uterus. The same disease has already proved fatal to many of them, and the remainder are suffering from it in a greater or less degree. Lisfranc states that, in those cases in which a predisposition to organic affections of the uterus existed, menstruation had been difficult at its commencement, and at each period irregular, and more or less painful.

Finally, it is not unusual to see chronic inflammation supervene, and yet neither patient, nor physician be able to assign any rational cause for its occurrence. Sufficient importance, however, is not attached to such daily or occasional exercises, as equitation, or journeying in a carriage either badly hung, or else having no springs at all, and yet they may, by their repeated succussion of the uterus, occasion a determination towards it.

Such is a general view of the principal circum-

stances to which the different affections of the uterus may be ascribed. If any one cause contribute more especially to the development of any one disease, it will be pointed out with details, when each disease comes to be separately considered.

III. SYMPTOMS, PROGRESS, AND TERMINATION OF DISEASES OF THE UTERUS; PROGNOSIS.

Uterine diseases are generally accompanied and manifested by nearly a similar set of symptoms. Direct examination alone, either by touch, or by sight aided with the speculum, can distinguish their individual characters. The union of many symptoms may, it is true, sometimes indicate the existence of one or another alteration; thus a sensation of weight in the pelvis, and expulsive contractions of the uterus, accompanied by occasional hemorrhage more or less profuse, &c., may create suspicion of intra-uterine polypus; but these are simple inductions only, of no value unless confirmed by local examination. A different course is blindly trifling with a patient's life. And yet it daily happens, that an affection, which was slight at its outset, is allowed to go on silently, until it passes beyond the reach of art. Many physicians, satisfied with the story which the patient tells of her sufferings, and making no further investigation to ascertain the nature or gravity of the disease, simply prescribe a few general remedies, more or less suited to the principal symptoms mentioned. A simple affection, — as slight engorgement, or leucorrhœa without structural alteration, — will undoubtedly yield to these

means. But let the affection be of a graver character ; let a foreign body be developed upon or near the uterus ; or ulcerations sulcate its inferior extremity ; — of what advantage will be baths, injections, or occasional venesection ? They certainly are excellent remedies, but in such cases should form merely the supplement to more appropriate treatment ; they will, unassisted, do nothing more in the majority of cases than retard the symptoms, and leave the patient in delusive security.

An error, which each day destroys its victims, and which is, unhappily, much too common among women — an error, moreover, which the conduct of many physicians contributes to perpetuate — is the belief, that the slight sufferings, or rather ailments, which frequently form the commencement of diseases the most formidable in their termination, are the necessary inheritance of their sex. Thus, for the sake of illustration, what importance is ordinarily attached to leucorrhœa, what attention does it receive, so long as the life of the patient is not endangered by its profuseness, or rather by the disease which produces it ? It is viewed with indifference, is regarded as being, as it were, a natural condition, as if every anormal secretion did not denote structural derangement. Many perish the victims of such diseases, where one is spontaneously cured by the resources of nature.¹

¹ Scruples of religion in Catholic countries, and the prudery of English and American women, will, for a long time to come, leave the treatment, in these countries, of diseases affecting the female genito-urinary organs in the hands of empirics and venders of specifics.

It is a fact familiar, doubtless, to old physicians, and a knowledge of which will not be useless on this occasion, that many women, when seeking medical advice, endeavor to instil the idea that the symptoms which they are about to detail are nowise connected with the uterus. Whether from shame, or some other feeling, they seem very desirous to make it appear that this organ is healthy. Some act in this manner from timidity ; they seek encouragement in self-delusion. Whatever may be the motive, in order to divert attention from the uterus, they speak constantly of the seat of their pains — which is the less frequently in the vicinity of that organ — of palpitations and spasms of the stomach. If they mention uterine hemorrhage, they at once endeavor to diminish the unfavorable impression which might be created by this symptom, oftentimes quite an unfavorable one. I have thought it right to mention this fact, even though it subject me to the charge of unnecessary minuteness, believing that no detail is to be neglected which will in any degree guard against errors in practice.

It has been stated that the larger portion of uterine diseases exhibit the same general symptoms ; therefore, to avoid the numerous repetitions which would unavoidably happen in considering each disease by itself, I shall previously give a collective view of these phenomena.

Diseases are not always manifested externally by symptoms proportioned to their gravity. This principle, which is so often exemplified, is especially applicable to diseases of the uterus. Very frequently this organ is found to be hollowed out by vast cavities,

and in a state of degeneration already past the resources of art, whilst the general health is apparently unimpaired, the complexion preserves its bloom, and, some slight symptoms excepted, the subjects are hardly aware of any trouble with the genital organs. Patients are often to be found in the ward St. Augustin, exhibiting all the plumpness and freshness of youth, and at the same time laboring under incurable uterine disease.

On the other hand, the simplest affection, as an engorgement, or slight excoriation of the neck, may occasion fearful symptoms, and seriously affect the general health. Still further, it is often observed, at the clinical examinations in the hospital La Pitié, that the pains and nervous symptoms increase as the disease advances towards its cure. It would seem as if the uterus became more apt to perceive pain in proportion as it returned to its physiological condition. I shall, however, revert to this fact in treating of cauterization.

It was important to point out these peculiarities, and to call attention to the errors which would follow undue reliance on general symptoms, apparently of little moment. Unhappily, many of these affections become incurable without manifesting any others, and dispel, when too late for remedy, the fatal security of practitioners not familiar with this class of diseases. A serious examination is therefore needed, from the very commencement of the symptoms. The following is a general outline of the progress of uterine disease at its onset.

From time to time, the patient has a slight metror-

rhagy, most commonly without pain; at other times, the discharge is white, and persists during the interval of the catamenia. The breasts swell slightly, and she sees herein an evidence of health. Occasional pains are felt about the loins, especially after walking, or riding in a carriage which is not very easy. In standing, there is an uneasiness, a bearing down in the pelvis, a dragging sensation in the loins, which fatigue her so much that she is obliged to sit down. Coition is occasionally followed by a little blood, and slight pains which sometimes disappear immediately, and at others, last for one, two, or even three days. The hemorrhage frequently proceeds from excoriations on the inferior portion of the os tincæ. Sexual intercourse becomes so unpleasant from being followed by this kind of uneasiness, of nervous erethism, that it is never submitted to without repugnance.

These hemorrhages, being slight, are most commonly neglected. Happily, there are cases in which the disease stops here and disappears of itself, either from the cessation of its cause, or from some other reason which cannot be discovered. But more frequently the disease advances; the pain increases in severity and frequency, affecting all those varieties of locality which will be pointed out hereafter, in speaking of this particular symptom; its acuteness soon becomes such, that its unhappy victims find no repose by night nor day, but in short and occasional snatches. The fluxes may be either white or red, but ordinarily the two occur alternately, increasing progressively in frequency and abundance. The strength of the patient, thus wasted both by the discharge and the privation of

sleep, is completely prostrated by the derangement of the digestive organs. The appetite goes; sympathetic gastro-enteritis sets in; the breasts lose their firmness and their size. In the day, the patient suffers from slight febrile paroxysms, occurring more or less frequently at first, and finally becoming continuous. The skin assumes a dry and dirty appearance; the lively hue of health is exchanged for a dull yellow tinge; colliquative diarrhœa, and repeated cold sweats terminate the scene.

In the latter stages of the disease, the nervous irritation sometimes becomes excessive, and constitutes actual paroxysms of hysteria.

Besides these general symptoms, there are some others relative to the character of the affection; thus it is occasionally necessary to remedy retention of urine and obstinate constipation, both often caused by pressure upon the neck of the bladder, or rectum, by an enlarged uterus. This increased size of the organ may proceed from the presence of a polypus, or from carcinomatous developement of its tissue; but these peculiarities and many others, not enumerated, will find place under their appropriate heads.

We must not, however, expect to find in every case of uterine disease that regular and progressively increasing advance in the symptoms, from their commencement to their termination in diarrhœa, which the preceding sketch seems to indicate. It has been previously remarked, that the disease sometimes stops at its first effects, and disappears of itself. This termination, it is true, has not appeared to Lisfranc of frequent occurrence; and the practitioner should be-

ware of placing more than a very limited confidence in the resources of nature, so effective in many other cases. The monthly evacuation has sometimes appeared to favor, or it may be, to effect the resolution of an engorgement of more or less recent date, and oftentimes occasioned by its derangement. But the engorgement, instead of being resolved by the catamenial flow, more commonly disturbs its regularity, and is consequently increased at each monthly period.

If the progress of uterine affections were always thus manifest and uniform, they would rarely reach a certain degree of gravity without medical advice being asked; but oftentimes, as it has been stated, the general health seems perfect, whilst the disease is quietly accumulating strength; the uterine symptoms, if there be any, are so slight and unimportant, that not unfrequently, the patient herself makes no complaint of them; and the uterus passes unsuspected by the medical attendant. Indeed, unless he is previously aware of the possibility of such a course to the disease, it invariably fails to receive serious investigation. How is it possible to suppose a woman to be upon the verge of the grave who still retains the fresh complexion, and fulness of figure corresponding to her age? Her powers still remain intact, so long as two symptoms — the pain, and fluxes, no matter of what kind — do not interfere to crush them. These two phenomena consume life rapidly, insomuch, that being suddenly developed by the progress of the disease, they reveal its existence in an alarming manner. From this moment, horrid pains dispel sleep; hemorrhage succeeds hemorrhage; the digestion fails; the feebleness increases as

tonishly ; the skin becomes dry and dirty ; and in seven or eight days, you see her, yellow and emaciated, who but lately was so plump and rosy ; finally, a colliquative diarrhœa — which rarely lasts more than one or two months after the appearance of the first symptoms—terminates the scene. In some cases, says Lisfranc, we have seen death ensue in twenty-four hours, from perforation of the uterus and consecutive peritonitis.

And these cases of uterine affection, so insidious in its progress, are far from being rare. Lisfranc meets with at least twenty instances of the kind annually. A short time since, for example, he was called to visit the wife of a lyric poet. The lady was still young ; had a clear and brilliant complexion ; and might be considered as one of the most beautiful women in Paris. Moreau, who had already examined her, was desirous of having Lisfranc's opinion. He touched her. The uterus was totally degenerated and reduced to *putrilage*,¹ being merely a fetid slough into which the finger easily penetrated ; not a vestige of hope remained. The family were advised of her situation ; but they thought Lisfranc had made a gross mistake, and formed an opinion of his skill by no means to his advantage. A few months passed, and the young wife was dead.

The duration of diseases of the uterus is exceedingly variable, being generally dependent upon the kind of alteration, and the vitality of the organ. Thus, other things being equal, a simple engorgement does not ordi-

¹ This term designates a semi-solid substance separated from disorganized tissues, especially from cancerous masses. Tr.

narily follow the rapid course of cancerous ulceration, whilst even this latter affection is modified in its course by age, constitution, and habits. Uterine disease is observed to be more frequent in occurrence, and more rapid in course, during the age of puberty when the uterus is executing its more active functions, and is moreover exposed to direct irritation, when so many sympathies link it to other organs, and when the moral system exercises over it so mighty an influence. At the cessation of the catamenia, disease passes through its stages with an extraordinary rapidity, under certain circumstances; whilst under the opposite circumstances, it proceeds on insensibly, and exercises a scarcely perceptible influence upon the duration of the patient's life.

Finally, uterine diseases, when left to themselves, most frequently have a fatal termination. Some, it is true, may disappear spontaneously; thus the return of the catamenia more or less copiously may dissipate a recent engorgement occasioned by its stoppage; these facts, however, are of too rare occurrence to authorize the physician to expect every thing from the kindly aid of nature. In the great majority of cases, the disease gradually grows worse, and in these cases principally, organic alteration exists.

It was observed in the infancy of the medical art, that the gravity of uterine diseases is increased by their unfavorable effect upon fecundity. Hippocrates regarded leucorrhœa as the one, essential cause of sterility; if his opinion appear too exclusive at the present day, it must be attributed to the want of exact knowledge as to those white and long-existing dis-

charges, which are but a symptom of more serious disease. Lucretius has introduced this very idea into the two lines ;

Nam steriles nimium crasso sunt semine partim,
Et liquido præter justum tenuique vicissim.

Mercurialis and other writers have cited instances of sterility from this cause. We shall hereafter see how near these ideas approach the truth.

Abortion is quite frequent in those cases, in which the disease is so slight as not to prevent conception. Forestier mentions the case of an individual, suffering from leucorrhœa, who aborted eight times. Lisfranc has often observed it consequent upon engorgement of the uterus, either because the diseased state of the tissues prevented their dilatation, or from some other reason, no matter what ; we think more of the fact than of its explanation. Independently of these obstacles to conception, existing in the pathological condition of the tissues, it has already been mentioned, that conjugal communication is frequently painful and exceedingly unpleasant. This, also, is a very ancient observation, for it may be found in the following passage attributed to Cleopater ; *Quibuscumque matricis humor ad vulvam respondet, harum corpus frigidum est, nec possunt aliquo modo masculi coitum gratum habere ; frigidum vero corpus intrinsecus habent usque in extremas partes.*

The principal object of this general sketch having been to exhibit the common symptoms of uterine diseases, we shall now proceed to recapitulate them with

special remarks on each. They comprise a white discharge, nervous pains and phenomena, metrorrhagies, reaction upon the mammary glands, and sympathetic gastro-enteritis.

1. *White discharge.* — The color, consistency, and quantity of this discharge cannot determine the nature of the disease by which it is supplied. A yellowish white, thick, and well formed pus however indicates, pretty generally, acute and recent inflammation of the mucous membrane, and nothing more. Every discharge has more or less of odor. Its odor, however, cannot determine the nature of the disease with more precision than its other physical qualities; only in confirmed cancer, it is a sour, pestilent smell, *sui generis*, such that, once smelt, it can never afterwards be mistaken.

2. *Nervous pains and phenomena.* — These pains are sometimes seated in the uterus, more rarely however; usually, they extend along the broad and round ligaments, and are occasionally expressed by a feeling of tension, of dragging, as if occasioned by a heavy body.

In certain cases, there is a sensation of stricture round the pelvis, as if it were tightly encircled by an iron ring. Sometimes, the pains are felt in the loins, umbilicus, epigastrium; at others, they shoot along the crural, or great sciatic nerves to the very end of the lower limbs. One patient complains of a sensation of heat, of burning; another of a sensation of cold and very painful numbness. These phenomena are at times so extreme, that they amount to true hysteric paroxysms, or else keep the sad sufferers in a state of

inexpressible anguish. Some are incessantly harassed by an excessive erethism of the nervous system, which deprives them of sleep, and almost drives them to despair.

In some cases, the patient refers all her sufferings to the rectum, as a fixed point; the explanation of this is, that the tumid or ulcerated neck, in consequence of slight anteversion of the body of the uterus, is pressing upon the recto-vaginal wall. These pains, generally of a nervous character, have by their location and progress led to error. They have, by turns, been taken for lumbago, nephritis, sciatic or crural neuralgia. It is, indeed, an error easily made by one not versed in uterine diseases, inasmuch as the pains are often the most prominent symptom, and cause the others to be forgotten, or at least disregarded.

The physician, who is aware of the almost invariable connection between these pains and disease of the uterus, will, the moment they commence, direct his attention to this organ, and see if he cannot find in it the source of the symptoms. The diagnosis, in these cases, is of the utmost importance. The lumbar or renal pains, for example, may be independent, or the consequence, of disease of the uterus; in the latter case, the error would be a serious one in its effect upon the treatment. Whilst vain attempts were making to conquer the symptom, the disease, by which it was continually renewed despite the power of medicine, would be left to increase unmolested.

Sometimes these phenomena extend to the nervous system of organic life. Thus certain patients vomit periodically, or at the commencement of the affection.

only; in this case, simulating the vomiting which follows incipient pregnancy. In other patients, Lisfranc has observed liquid alvine discharges occurring occasionally at the menstrual epoch. In other cases, the nervous phenomena affect the central circulation. The patient suffers from palpitation; respiration is short, and hurried when she runs, or goes up stairs; at other times the pulsation of the heart is violent and as if convulsive; there is, apparently, aneurism of the left ventricle. This symptom, however, is known to be common with young chlorotic females, and has frequently been attributed to aneurism. I shall hereafter relate a case in which Lisfranc, being himself undecided, saw distinguished practitioners, who had been called in consultation, commit this very error. However, the necessary result of this increased activity would be in time an augmented thickness of the cardiac walls; and hence the reason, doubtless, why this symptom disappears so slowly when the disease, which kept it up, has been cured.

Lisfranc, who is always seeking for indications of treatment, endeavored to ascertain, whether the presence or severity of the pains was proportioned to the degree of inflammation; or, in other terms, if an acute or sub-acute inflammation occasioned more severe and more frequent pains. In the majority of cases, there was no constant relation between it and pains of a nervous character in the vicinity of the uterus; they existed just the same in an affection essentially chronic. The severity of the uterine pains, properly so called, is frequently dependent upon a state of inflammation. Local signs are, consequently, needed to determine whether the disease is in an acute state.

Separately considered, the character of the pains does not indicate the kind of alteration. Lancinating pains, which are stated as one of the signs of carcinoma, are sometimes met with in sub-acute inflammation of the cellular tissue, and especially in inflammation of the lymphatic glands and system. This single characteristic does not, therefore, strictly speaking, determine any thing; Lisfranc, however, has observed that, in uterine affections, it coincided almost uniformly with ulcerated cancer, or scirrhus engorgement, revealed by this in conjunction with other signs.

3. *Hemorrhage*. — A red discharge, varying in color and consistency, may take place in every case. The blood lost is generally serous in women debilitated by profuse and repeated hemorrhage; its physical qualities are also modified by its mixture with the secretions. Every part of the uterus, whereon an irritation is seated, may occasion hemorrhage. As a general symptom, therefore, it merely indicates the existence of some disease or other, whose precise nature is to be ascertained by other modes of investigation.

4. *Reaction upon the mammary glands*. — At the onset of the disease, whilst the patient is yet unexhausted by suffering, the breasts swell slightly; this phenomenon is frequently regarded by her as an indication of health. This swelling, however, always takes place whenever the volume and irritability of the uterus are augmented by any cause; thus it is observed at the commencement of pregnancy, of which it is, by no means, a pathognomic symptom; but in pregnancy, the breasts continue to enlarge, whilst at a

later stage of uterine disease, they lose their firmness and their size.

5. *Gastro-enteritis*. — Gastro-enteritis is frequently a sympathetic effect of uterine disease. Like the preceding symptom, it may arise from all kinds of alteration in the womb. Whenever, therefore, it is present, the genital organs should be examined to ascertain whether it exists in the relation of cause to effect.

It has been mentioned above that Lisfranc, having pronounced a lady incurable who still retained all the external appearance of health, had advised her family of her danger. In similar cases, it is incumbent upon the physician to act in a similar manner; first, from personal considerations, as otherwise his skill might be questioned, if he had encouraged hope in a desperate case; secondly, it frequently happens that the family trusts to him to be informed in time to settle all affairs relative to the disposal of property. To leave them in ignorance of the patient's condition would frequently expose their interests to great risk. On the other hand, before alarming those interested, the physician should make himself as certain as possible of his fact; an error, under such circumstances, would expose him to worse charges than self-contradiction. Finally, if in doubt, he should say so, and prudently ask the aid of another's counsel.

IV. GENERAL TREATMENT OF UTERINE DISEASES.

The cure of these, as well as of the chronic inflammations of other organs, is frequently long and difficult. Remedies, apparently the best indicated, pro-

duce sometimes but little effect. The division just made of the pathological phenomena, observed upon the living subject, will serve as the basis of treatment.

As soon as the nature of the disease is discovered, it is to be combated with an obstinate perseverance. The principal indications are; 1. to endeavor to remove irritation present in the uterus and its appendages; 2. to quiet pain; 3. to divert elsewhere the determination to the uterine system; 4. to dispel congestion already existing; 5. to prevent relapse.

If the acute stage has not already subsided, means must be taken to moderate, if possible, the inflammatory action directed to the uterus. Generally speaking, the vigorous and long continued employ of antiphlogistics is the measure most entitled to confidence, especially if the individual be young and plethoric, and the case, suppression of the catamenia, of an habitual hemorrhage, or of the lochia. Venesection in the arm, repeated frequently with the precautions mentioned under the head *Blood-letting*, is one of the most appropriate means of diminishing the irritation in the uterus.

Of all the symptoms, the pain should receive the most attention. It imbitters existence, and tends to increase the affection by elevating the sensibility of the diseased organs, and by causing a determination of fluids to them. General bleeding exercises a very striking influence over it, and though it may not entirely dissipate, often diminishes it, and places the patient in a condition to be acted upon more favorably by other anodyne remedies.

Even though the constitution of the patient is fee-

ble this course must be pursued, but with great discretion. The loss of blood should be less in quantity and frequency; the great principle—not to desolate the territory which is the scene of war—should never be forgotten for an instant. In many cases—as it will be pointed out hereafter—general bleeding should be considered as derivative, that is to say, rather as a means of diverting the blood in another direction, than of diminishing the quantity in circulation. We shall see presently what opinion should be formed of local bleeding as advised by certain writers. To these measures may be advantageously joined emollient injections into the vagina, frequently repeated, general bathing, mucilaginous and anodyne enemata.

Ointments, composed of such narcotics as the extract of belladonna, the oil of hyosciamus, anodyne balsam, oil of camomile, are to be rubbed in upon the hypogastrium, the groins, and the upper part of the thighs; small enemata containing an anodyne are to be administered. Injections of distilled laurel-water have been proposed as a very powerful means of diminishing the pain and inflammation.

The irritation and pain being somewhat quieted, we must next attempt—by frictions upon the back, and arms, and by dry cupping upon the shoulders and beneath the breasts—to divert to other parts the determination to the uterus. Some writers even advise the application of temporary blisters to the arms and shoulders.

In spite, however, of the best concerted means of treatment, we cannot always, nor easily, succeed in the end proposed. The inflammation is frequently,

and without the least premonition or deviations of regimen, instantly renewed; and it must be attacked anew by the same measures, and in the same manner, as just indicated. It will be well to add to them the internal administration of anodynes, as the preparations of cicuta, hyoscyamus, aconite, distilled water of the cherry laurel, bitter almond, peach leaves. It is stated by Fourcade that pains, which had resisted narcotics, yielded to the administration of four or five drops of phosphoric acid greatly diluted.

Little, indeed no benefit is to be expected from the efficacy of these different means, unless their action be seconded by repose and regimen. During the stage of pain and irritation, the diet to commence with should be very severe. As soon as the symptoms yield, we may relax a little in its severity, which ought to be regulated with particular care by individual idiosyncrasy; for there are persons who cannot be subjected to a diet any wise strict, without experiencing unpleasant symptoms. The food should be of easy digestibility, and taken in small quantities at a time, as a few large spoons-ful of thin soup or chicken broth, thickened with the fecula of potatoes, tapioca, arrow root, or salep. If the patient be very feeble, and bleeding at the same time be indispensable, her allowance of food may be one fourth her usual quantity. The diet, as far as possible, should be composed of vegetables; but, if the stomach cannot bear them, or gets wearied of their use, white meats, fish, milk, and fresh eggs may be allowed. Stimulants, and all articles which greatly promote sanguification, such as dark meats, fermented liquors, coffee, &c., must be

forbidden. It is frequently necessary to suspend the treatment for a few days — to allow the system time to recruit its strength — again to return to it.

When the chronic stage is well established, recourse may be had with advantage to means suited to promote resolution, by creating a little excitement about the pelvis (hip-baths, leeches about the pelvis, &c.) Favorable effects are also obtained from the use of slightly stimulating injections, from baths of the mineral waters of Barèges, from douches of the same waters — which have been successfully employed by Alibert — upon the hypogastrium, the sacrum, and even the neck of the uterus. Frictions with mercurial ointment, and the ointment of the hydriodate of potass, are frequently very useful. Blisters are to be applied to the internal and superior part of the thighs; and cauteries and moxas to the lateral and lumbar portions of the spine, or, which is better, to the abdominal parietes, at the place which will be pointed out hereafter. By these latter measures, we shall maintain a constant and beneficial derivation.

During these different stages, we must enjoin abstinence from sexual intercourse, and prohibit the perusal of books calculated to excite the imagination. We must comfort our patients, neither flattering them too much with the hope of a speedy cure, nor yet placing it at too distant a period. It frequently happens that at the very moment in which a marked benefit has been gained, the occurrence of some strong moral emotions either effaces the improvement, or else impedes the treatment.

Such is a brief view of the course of treatment of

uterine diseases generally. We have intentionally omitted certain surgical applications to the diseased parts themselves, as they will be considered under their separate heads. A special examination will now be made of each therapeutic measure habitually employed by Lisfranc.

V. SELECTION OF THE MEANS OF TREATMENT,
AND THEIR MANAGEMENT.

We have now arrived at a point which is essentially practical, and which, in our opinion, constitutes the physician's whole power in the art of healing. It is not sufficient to state generally that certain means are employed in such or such diseases; general remarks of this nature are fatal to the science. Therapeutics, the sole object of a sound medical system, exists only in details; with a steady look it follows the ever changing indications; and if it sometimes appear uncertain and timid, it is for the purpose of studying more fully the nature and cause of the disease, the idiosyncrasy of the patient, and a thousand other circumstances, the result of which is an increased degree of confidence and boldness. This, at least, is our understanding of this principal branch of the medical art, as practised by the lecturer whose ideas we publish.

Whatever may be the affection discovered by touch and the speculum, there is a series of general means to be employed, which we mean to review, discussing and defining the efficacy and application of each. Of this nature are, when the disease is acute, bathing, repose, injections, enemata, blood-letting, cataplasms,

beverages, and regimen ; when it is chronic, flying blisters, cupping, douches, issues, and compression.

1. *Bathing*. — Bathing is an excellent antiphlogistic. Without involving ourselves in explanations as to its *modus agendi*, whether by relaxing the skin, or by introducing water into the system by means of absorption, we shall simply say that it generally produces a very perceptible degree of calmness, repression, and relaxation.

Physicians, generally, prescribe hot and emollient hip-baths, and all treatises on pathology inculcate their employment even in acute affections of the uterus. Scarcely ever, says Lisfranc, are we called to visit a patient without finding her in the use of these baths. We invariably prohibit them as the greatest absurdity in therapeutics. In cerebral congestion, we prescribe a foot-bath expressly to draw the blood to the inferior portions of the body, but yet when directed for disease in the pelvis, the fear of its causing congestion in the pelvis never prevents its employment. But putting theory aside, what does experience teach ? We generally employ the hip-bath whenever we wish to restore the catamenial flow. Physicians regard it as a measure calculated to congest, and congestion is their object. Do they forget this fact, in treating sub-acute inflammation of the uterus, or do they suppose that the effect of the bath will be in accordance with their wishes ? It is an error of judgment so perceptible as to require no further comment.

This principle of ours, however, is not based upon theory alone, but upon a large number of comparative experiments.

It will be found that, after using a hip-bath, a patient almost always complains of severer pain and greater weight in the pelvis. We can therefore assert, that a single bath of this kind, prescribed with the ordinary intentions, is sufficient to neutralize all the previous benefit from a judicious course of treatment. We urge these facts the more willingly, because it will be difficult to uproot this erroneous idea of the value of local baths, which has existed so long, and has, as it were, interwoven itself with common opinion.

We do however, under certain circumstances, employ hot and emollient hip-baths, as for instance, in combating an essentially chronic affection of the uterus, in which its congestion acts as a needful stimulus. But in this case, the patient's condition is, evidently, entirely the reverse of that of which we have been speaking, and the indication totally different.

Under all other circumstances, entire baths, hot or rather at a temperature agreeable to the patient's feelings, and to which she is accustomed, are alone appropriate. Simple water is sufficient. Emollient decoctions, or gelatine, which is sometimes added, may be very useful in cutaneous diseases; but in these of the uterus, there is no advantage great enough to compensate for their expense and trouble. We repeat, that baths of water merely will yield all the benefit desired.

Generally speaking, patients do not remain long enough in the bath. The common practice is to continue therein from half to a whole hour; but a bath of such brief duration, instead of being emollient, or antiphlogistic, rather acts as a stimulant. If, in

fact, on entering a bath you feel your pulse, and then reëxamine it some time afterwards, you will find it, almost uniformly, increased in strength and frequency. With the pulse, respiration also is accelerated ; the cutaneous secretion increases ; the head becomes heavy, and there is a slight inclination to sleep. It strikes us that as yet there has been no sedative effect produced by the bath. These phenomena are more intense in women of a nervous temperament, and frequently last half an hour.

By prolonging the bath, these phenomena of general excitement are replaced by a state of tranquillity, of repression, which constitutes, as it were, its antiphlogistic period. It is, therefore, imperatively necessary to prolong the bath ; we are particular, says Lisfranc, in recommending the patient to remain in the water from two to three hours, or even four, five, and six consecutive hours, according to the effects produced by the bath, and her strength.

There are patients whose sufferings cease as soon as they enter a bath ; they live, in fact, only in the water. These are the cases in which its use is to be prolonged the utmost possible. Nevertheless, to avoid the wearisomeness almost inseparable from such a long continuance of it, a bath of three hours length may be taken in the morning, and a similar one in the evening.

To some women, on the other hand, the long continuance of the bath is very unfavorable. They become so fretted and so impatient, that they must leave it to avoid a nervous attack. There are even some women who suffer from nervous symptoms the moment

they enter a bath. Having regard to these idiosyncrasies, we must in the first case shorten its duration, and rarely recur to it in the second, and even totally abstain from it if they cannot gradually get accustomed to its effect.

Finally, we not unfrequently find individuals whose epigastrium is so sensitive, that they are threatened with suffocation whenever this region is compressed by the fluid of the bath. In such cases we must abandon its use. This is a misfortune in truth; but it is better to act so, than expose the patient to adventitious sufferings.

Generally, a bath is directed every other day unless the patient be very strong, in which case one may be used every day. If on the other hand she is weak, its employment should be less frequent, and in proportion to the degree of feebleness.

It is quite difficult, in private practice, to induce a patient to remain in a bath the length of time which we have indicated. A thousand objections are raised; numberless impossibilities are started. The physician who sees only the real interest of his patient, instead of conceding to difficulties which are oftentimes merely imaginary, will represent to her the benefit to be derived therefrom; he will prove to her that it is much better to remain three or four hours in a bath, than be exposed to all the sufferings of a severe disease. He is finally to bear in mind that, though under all other circumstances, the utmost deference is due to the sex, it is incumbent upon him to be firm in requiring an exact observance of his directions.

It is of course understood that regard is to be paid to the exceptional cases above stated.

In the diseases now under consideration we do not relinquish the use of local baths, but we seek from them an effect entirely different from that which is produced by the entire bath, or in other words, we follow a different indication.

We have previously stated, that hip-baths are an efficient means of congesting the pelvis and consequently the uterus. This congestion stimulates, activates its vital properties, and, though very dangerous in cases of irritation or sub-inflammation, is under the opposite circumstances a powerful remedial agent. Thus in an engorgement of the uterus, unattended by pain or tenderness to the touch, exhibiting in a word all the signs which characterize purely chronic inflammation either primitive, which is rare, or consecutive to treatment, Lisfranc prescribes hip-baths, in connection with other resolvents. He prescribes them then, we repeat, with views entirely different from those of the generality of practitioners.

On this same principle still, that is to say, when we wish to congest, we continue to have recourse to hip-baths for the purpose of facilitating or recalling the catamenia; we shall see hereafter in what cases the indication to congest presents itself. On this point we are in accordance with other practitioners, and their course in this particular case justly condemns them for not deviating from it under opposite circumstances.

Foot-baths, either simple, or aromatic, or made stimulating by salt or muriatic acid, act similarly to the preceding, and their employment is based upon the same principles.

Among local baths, we ought also to add hot arm-

baths. This means, either alone, or combined with others more or less active, is intended to produce a revulsion to the supra-diaphragmatic region, and in this manner it acts as an antiphlogistic and, as it were, an evacuant of the uterine system.

2. *Repose.*—It is a principle in physiology, that the motion of an organ stimulates it, increases its vitality, and tends to develope it by congesting it, by attracting towards it nutritive and restorative fluids. This fluxionary movement is, doubtless, very beneficial to a sound organ; but if it take place in inflamed tissues, already gorged by blood, it may cause their rapid disorganization, or at least maintain their pathological condition.

These principles are especially applicable to the diseased uterus, whose mode of connection with other parts of the system renders it very susceptible of being influenced by exercise. In walking indeed, this organ is more or less jolted in the pelvis. The suspensory ligaments yield to its unusual weight, and the mass of the intestines also aids in pressing upon and contusing it. The uterus, moreover, being essentially vascular and congestionable, is unfavorably influenced, whenever any cause accelerates its circulation.

But without confining ourselves to theory alone, let us look at the facts. In sub-inflammation of the uterus, exercise ordinarily increases the patient's sufferings, and frequently, a walk is the determining cause of hemorrhage. Whenever, says Lisfranc, walking causes pain, the rest of the treatment will be of no avail unless the patient be subjected to perfect repose. I have often endeavored to cure without this precau-

tion, but all my efforts were useless ; hence arises the necessity of absolute repose. This principle must be strictly enforced, subject, however, to the exceptions which will be presently stated.

In consequence of its congestive effect, the least walking may neutralize the most judicious course of treatment. Thus when, in spite of your care, the disease does not perceptibly diminish, when it remains stationary, or even increases, it is advisable, before seeking any other cause of failure, to ascertain in the first place that your patient does not walk ; do not inquire of her, for she is always ready with a suitable answer, but of those about her. This precaution is the more necessary from the difficulty of enforcing absolute repose.

Six months ago we were in attendance on a lady, who, in despite of our utmost skill, continued to grow worse. She assured us that she observed the strictest repose ; and we were unable to account for our want of success, until informed by persons in the house that she was accustomed to pace her chamber, which according to her was not walking. Two months since, she was placed under the supervision of two trustworthy persons, and is now nearly well.

Repose should not be taken in bed, for it heats and congests the pelvis ; in man, it produces erections which cannot be attributed to fulness of the bladder, because they occur even after the bladder has been emptied. Many ladies of high rank whom we attend, have formed the habit of rising very early, to avoid the pain occasioned by long continuance in bed.

The patient must recline, not sit, upon a couch, for

the latter position exposes the uterus to be pressed and contused by the weight of the abdominal viscera. To avoid all motion, she should be carried to and from bed.

This rule of absolute repose is however, as we have stated, subject to exceptions. Temperaments differ so much, and there are so many nervous varieties, if we may be allowed the expression, that no general principle can be established in medicine without a modification. Whilst in repose, certain women cease to digest; their stomach loathes food; with others, the nervous system gets exasperated, as it were, and the symptoms are aggravated; in such cases a little exercise becomes necessary. Walking is in general preferable to the jolting of a vehicle however well suspended.

The period of the catamenia has also its appropriate indications. The sufferings of most patients diminish as soon as the flow commences; this is a favorable time, of which advantage should be taken, to make them walk. Exercise has the double advantage of facilitating the menstrual evacuation, and of recruiting the strength by improving the digestion.

To those, on the other hand, whose sufferings increase during this evacuation, repose is more necessary than ever.

Finally, with a good number the want of exercise suppresses the catamenia. This is a serious accident and one which must be avoided at all hazards. The reason is plain.

Repose of the affected organs is particularly indispensable. Theory would sufficiently demonstrate its

necessity, even though daily experience did not. In the majority of cases, coition is a fire-brand to an uterus in a state of sub-inflammation, both by its direct action, and its general excitement, which is necessarily reflected back upon an organ more than usually impressionable, in consequence of its deviation from a normal state.

When the uterine affection ceases to show the signs of sub-inflammation, and when the chronic state is well seated, well proved, new indications present themselves, and require a change of treatment. Moderate exercise must now be allowed. Sexual intercourse, in moderation, will prove an adjuvant to other measures.

Only beware of too much stimulation, lest the inflammation be renewed ; in this contingency let the previous treatment be resumed.

3. *Injectiōns.* — The nature of these injections must vary with that of the disease. According to the indications, they are emollient, astringent, detersive, or even consist of the solution of the chloride of lime in fetid cancers, which it is important to cleanse. We shall not take up time in describing their mode of preparation, or the precautions to be adopted in certain cases ; we shall briefly state the circumstances in which they must, notwithstanding the most positive indication for their use, be renounced.

The liquid should not be too cold, lest it excite reaction ; nor too hot, lest it cause congestion. A suitable temperature is from 66° to 76° Fahrenheit.

A pewter syringe of moderate size is the instrument ordinarily used for this purpose. Its canula or pipe is likewise of pewter, and terminated by an olive-shaped extremity of quite a large size.

The presence of this hard and inflexible body is not easily borne by the vagina, the sensibility of which is greater now than in its normal condition. So much indeed has inflammation increased its irritability, that some women, after painful trials, absolutely refuse to practise these injections.

It is infinitely preferable to use a gum-elastic canula; it is softer and more flexible; and its extremity, which should not at the utmost be larger than the tip of the little finger, enters more easily, and frets the parts much less. Many women, who were unable to bear the introduction of metallic bodies, have used this latter with benefit.

We reject entirely the *clysoir*.¹ The jet, caused by the weight of the long column of liquid contained in it, is too forcible; instead of tranquillizing, it contuses the already inflamed neck. The consequences are easily foreseen.

The end of the canula is first to be oiled. There is a disadvantage in making use of solid fatty bodies; some portions of them almost always remain in the vagina, and, there uniting with the secretions, may undergo rapid decomposition, and thus become a new cause of irritation.

To derive the greatest benefit from injections, the vagina must first be cleansed by common injections taken in the usual position. The patient should then lie upon her back, the pelvis being raised above the level of the trunk so as to form with the horizon an

¹ A flexible tube, two, three, or more feet in length, frequently used to administer enemata. TR.

angle varying from 30 to 35 degrees. The vagina is now upon an inclined plane, the lower extremity of which is at the neck of the uterus. The canula is introduced only about an inch or eighteen lines into the vagina, and even less if there be prolapse of the womb, in order not to strike its tip against the diseased neck; moreover, the injection passes in just as well. Finally, to avoid the least jet which might jar the neck, the piston of the syringe is forced downwards with extreme slowness, in such a manner as to expel the liquid without any impulse.

The vagina, ordinarily, is capable of containing five or six tea-spoons-ful of liquid. It is well to make this known to those who, imagining it to be of greater capacity, tell you that the injection will not remain in.

The injection collects about the neck, being the lower extremity of the plane, and there forms a very beneficial local bath, which at first should last from five to ten minutes, and afterwards for a quarter of an hour. These little baths are to be repeated thrice daily, morning, noon, and evening.

Sometimes the external orifice of the vagina contracts upon the tube, and prevents the escape of the liquid; in this case we must not force the injection too much, lest by distending the vagina we increase its reaction.

Injections are also administered, and with the greatest advantage, whilst the patient is in the bath. Here the pressure of the water in the tub, without any particular position, will prevent the escape of the injected fluid.

In spite of every precaution, injections still cause

suffering ; either the introduction of the tube is painful, or else the vagina contracts upon the liquid and expels every drop of it. These phenomena show themselves more frequently, and oftentimes only, some days preceding and succeeding the catamenia, a period in which the sensibility of the genital organs is, in general, singularly heightened. This circumstance is the more to be regretted, as injections would be of greater benefit now than at any other time. We must however persevere in every case, unless the pain be excessive. The orifice of the vagina, and the canal itself, will ultimately get accustomed to them, and the quantity which remains in, however small it may be, will be very beneficial. We have merely to remark that, whilst this irritability continues, the injections should be of shorter duration and less frequency.

Some patients complain that injections make them worse ; we must first of all be satisfied that dislike to them does not occasion the complaint ; if however they are decidedly injurious, if the attributed effects really depend on them, there is no reason for their continuance.

4. *Fomentations.* — The vagina may be choked up by vegetations from its walls or the neck of the uterus ; these anormal tissues are irritated and bleed at the slightest touch. In this case, fomentations to the vulva must be substituted for injections. The large labia being gently separated, a soft sponge wet with some medicated fluid is applied to the orifice of the vagina, the least pressure or friction being carefully avoided either in applying or removing it.

5. *Cataplasms within the vagina.* — We have seen

that by placing the patient in the position just described, a local bath can be formed in the vagina. To obtain the same result, previously to the occurrence of this happy idea, cataplasms almost fluid were injected, and kept in by compresses upon the vulva. I myself, says Lisfranc, formerly commended them, trusting too much to the reports of those who professed to have derived great advantage from their use. Now I entirely reject them, and for the following reasons. In the first place, patients dislike extremely these mucilaginous, pasty applications; they are nasty, and irksome to the feelings. Their employment, it is true, might be persevered in, if it had no more serious disadvantages than this. But the vagina cannot afterwards be cleansed from the material of which they are composed. It is of no avail to discontinue them two or even three days previous to examination with the speculum, and to prescribe frequent simple injections to cleanse the vagina; in spite of all these precautions portions of it adhere and obstruct the view, and require to be removed, not an easy affair either, with a small mop. The injurious effects of the friction, necessary for this purpose, will at least counterbalance, to say nothing more, the benefit derived from the cataplasms. Finally, if a poultice upon the skin ferments in a few hours, what will it do in the vagina, where the temperature is much higher, and where abundant secretions help to accelerate its decomposition?

Much has been said in praise of an old method, recently renewed, which consists in placing about the neck, by means of the speculum, lint wet with some simple or medicated fluid. Without disputing its re-

ported success, we will mention the result of our own experience. In private practice we have never derived any benefit from it, though it may possibly serve a good purpose with public women, whose genital organs have lost a portion of their sensibility.

Eight or nine years ago, at the instigation of others, we made numerous trials with lint thus prepared ; but, in almost every case, it occasioned such pain and irritation as to necessitate its removal.

6. *Irrigation*. — By this term we understand a stream continued for a longer or shorter time ; it is, properly speaking, a prolonged injection.

Irrigation serves as a transition from the simple injection to the douche. Being more active than the former, it is employed after it as a slight stimulant and resolvent, when the degree of irritation forbids the employment of douches.

An irrigation may be obtained by making eight or ten successive injections ; but, with many women, the repeated introduction of the tube would be attended by serious disadvantage. In these cases a larger syringe may be employed, the greater capacity of which would diminish the necessity of reintroducing its pipe so frequently. A *clysoir* also may be beneficially used, merely taking the precaution to introduce only a small quantity of water in order to moderate the force of the jet. Irrigations may be made twice daily, in the morning and evening.

7. *Douche*. — This remedial agent is a powerful resolvent, an energetic stimulant. Whatever may be the temperature and nature of the liquid, the part upon which the jet strikes is first depressed in proportion to

the yielding nature of its tissue and the force of the column of liquid, and then its circumference grows red to a greater or less distance. This reaction is consequently well adapted to hasten resolution by awakening the vitality of the engorged tissues. We should therefore never have recourse to it until the disease has passed to a chronic state, and when there is little or no pain or tenderness on pressure.

The slightest remnant of inflammation or sub-inflammation positively contra-indicates their employment ; in this case, they would prove a fire-brand.

We will previously remark, that Lisfranc uses the douche against chronic engorgement of the uterus or, simply, of its neck.

Like injections, the douche may be simple or medicated ; its temperature ought to be almost cold. Medicated douches are, in general, infusions of aromatic plants, or solutions of saline or sulphurous salts ; and their greater activity, in the latter case, is attributed to the increased density of the liquid, from the presence of the saline matters. Whatever may be the reason, their temperature like that of injections should be nearly cold, unless very vigorous reaction be desired, in which case it may be elevated.

A simple plan of forming a douche of any required force of jet is the following ; at a certain height, place a vessel filled with water ; attach to it a flexible tube having at its other extremity a gum-elastic canula. The force of the jet being proportioned to the elevation of the vessel, it can be graduated at pleasure. Douches vary in kind, being either showery, or of a single jet ; the activity of the latter is greater than

that of the former, and may be still more modified by varying its size. From the direction of the liquid, the douche is divided into the ascending, horizontal, and descending ; it is apparent that its action is very different in these three cases. The ascending douche, mounting in opposition to its own weight, strikes with much less impulse than the descending jet acted upon by the two united forces. The horizontal douche, being of a medium degree, serves as a means of transition. Finally, its activity in each case is still further modified by the amount of impulse communicated to the liquid.

We have thought it right to enter into this short detail of the varieties of the douche, for the purpose of showing the manner of varying its application. This point is more practical than it at first seems to be. For instance, whenever we employ resolvents to dissipate chronic engorgement, wherever seated and of whatever nature, we are always careful to commence with small doses, which afterwards are gradually increased ; in the same way ought we to graduate the action of this remedy. If we were, at the outset, to stimulate an engorged organ powerfully, we should be liable to an out-burst of inflammatory symptoms. The activity of the douche therefore — which is always easily regulated by the direction and impulsion of the liquid — is to be at first very feeble, scarcely different from that of irrigation, and successively increased to higher degrees.

On these principles, Lisfranc commences by the showery and ascending douche about the pelvis ; he gradually increases its impetus, and finally directs it

into the vagina, in a single jet which he makes strike even upon the neck of the uterus.

The jet, at first, should be from an elevation of three, then four, and then six feet, and so on, always being governed by the effects obtained. On the same principle, one douche a day is sufficient to begin with; afterwards two, three, and even more may be given. Its duration must be graduated with equal attention; it may be five or six minutes at the commencement, and be successively increased to fifteen.

The physician must vigilantly watch the effects of this solvent medication, always ready to modify, suspend, or even replace it by antiphlogistics, the moment the excitement, which he seeks to produce, passes its legitimate boundary.

If at the termination of the douche the patient experience a sense of heat and slight pains, lasting, however, for five or six minutes only, the excitement has reached a suitable point, and its use may be persevered in without fear; but if the pain continue for a longer time, it indicates an excess of sensibility, and proves, quite generally, that the disease is as yet too acute; the douche must therefore be more gentle, and even milder means substituted.

Care should be taken to prevent the bed or couch from being soaked. They should be covered by an oiled cloth, so disposed as to turn the water into a basin; and when the douche is made into the vagina, a flat vessel with a rounded edge is to be placed under the perinæum. In short, the physician will employ all the means at his disposal to effect this object.

8. *Enemata*. — These should be administered often

enough to keep the bowels properly free. Constipation acts injuriously in two ways ; first, by causing painful pressure on the uterus, from the accumulated contents of the intestines ; secondly, by compelling the patient to strain when evacuating the bowels. They are to be of simple water, at the same temperature as the injections. If the constipation be any wise obstinate, a few spoons-ful of olive oil, or of brown sugar, may be added. They should on the other hand be emollient, if any inflammation exist about the anus or large intestine.

Constipation is to be especially guarded against after an operation, or during convalescence. Sometimes an accumulation of hard and dry fæces forms at this time in the rectum. A mass of this kind, enveloped by a layer of mucus, has been more than once taken for an anormal tumor. We once went to Sceaux, says Lisfranc, with all the requisite instruments, to remove a supposed sarcomatous tumor in the rectum, which turned out to be nothing but a globular mass of hardened fæces. An error of this kind may be avoided by scratching away with the nail a small portion of the mucous envelope ; the nature of the tumor is then easily discovered. In such cases, little is to be expected from purgatives ; their administration moreover may be contra-indicated.

Sometimes the enema cannot enter ; the canula of the syringe is stopped up by the fæcal mass, into which it has penetrated. It is, in this case, indispensable to empty the rectum with the finger, and not with the scoop, the movements of which cannot be controlled with so much certainty. If however we

propose to soften and bring away the fæcal mass by means of enemata, the finger must first be passed between it and the intestine, and then a long gum-elastic tube directed between the finger and the intestine, till it reaches beyond the obstruction. The liquid now enters easily, and brings away the fæcal matters.

It might be asked whether, in ordinary cases, laxatives would not answer the same purpose as enemata; we will therefore observe that it is of so much importance, in diseases of the uterus, to avoid all irritation of the digestive organs, that we have, after many trials more or less injurious, entirely abandoned their administration; hence, enemata become an object of primary importance and absolute necessity.

9. *Narcotics*. — This class of medicines is very much employed in the treatment of uterine diseases, and from them the greatest benefits are derived. There is no practitioner who is not aware of the influence of the uterus upon the nervous system, an influence so mighty that the slightest affection of this organ frequently induces nervous disorders almost incredible, as the phenomena of hysteria alone amply demonstrate. Whilst then we combat the disease which is the primary cause of all the disturbance, it is rational to seek to tranquillize, or at least to modify by narcotics pains, which, though at first the effect of irritation, afterwards become one of its most active causes. The administration of narcotics, though so simple in medical treatises, is embarrassed by peculiarities, which it is important should be known.

It would seem *à priori* as though the vagina were the most favorable channel by which to administer

narcotics ; that, in union with injections, they would act more directly, because applied to the very seat of disease ; experience has proved it otherwise. Administered in this way their effect is much less ; and, frequently, far from being sedative, they excite nervous and inflammatory phenomena.

It had been previously observed by Cullerier that laudanum, when employed as an injection for painful chancres, very frequently excited inflammation of the vaginal mucous membrane.

Narcotics are administered by the mouth, if the state of the stomach will permit it ; or applied by friction to the peritoneum, to the groins, to the inner and upper part of the thighs ; but the rectum is, unquestionably, the most advantageous channel and that by which the most certain results can be obtained. Whether the effect be owing to more rapid absorption, or whether their power be not impaired, as it is in the stomach, by the digestive process, is of little consequence ; experience has demonstrated the fact, and that is sufficient. Notwithstanding its advantages, this mode of administration should be given up, if the enemata occasion colic pains, and cannot be retained.

Another very excellent mode of administration, especially when the disease assumes the character of a neurosis, is the endemic. It consists, as is well known, in dressing a small blister, placed upon the tract of the pain, with a salt of morphine, either the acetate or the more soluble hydro-chlorate.

For frictions, we prefer the extract of belladonna, mixed with a small quantity of water. Internally, laudanum is generally administered. Besides the other

preparations of opium, we may also occasionally make use of those of belladonna, hyoscyamus, and of another class of medicines more particularly designated as antispasmodics, such are assafœtida, valerian, &c. In making his selection from these remedies, the physician should always be governed by the peculiarities which we are going to mention. We have frequently observed that the addition, to a small opiated enema, of two or three grains of camphor, previously beaten up with the yolk of an egg, remarkably facilitated the action of the narcotic.

If idiosyncrasies were not as numerous as individuals, if narcotics always had to act upon similar temperaments, if the system, becoming insensibly habituated to their action, did not finally cease to be influenced by them at all, the physician might confine himself exclusively to one single preparation — proved by his experience to be the most beneficial in its action — and lay all others aside. It is not so however ; the effects of these medicines vary astonishingly. Each temperament seems to have its favorite narcotic. Thus one will entirely fail whilst another of the same class, sometimes even of a less active class, will succeed admirably. Still further, this variety of action upon the system is found even in the different preparations of the same narcotic.

It is impossible therefore to know *a priori* what preparation is preferable ; this knowledge can be obtained only by trying many in turn, and selecting the one whose action is the most favorable. Generally, we commence with the narcotic to which the patient is accustomed, and continue its use, if it answer expectation.

The influence of the narcotic which is selected soon diminishes from day to day. The system gets so habituated to its action, that the dose requisite to produce the same effects must be gradually increased. Therefore, when a patient commences the use of narcotics, the commencing dose should be very small — for the purpose of economizing her sensibility to its influence — and increased as slowly as possible.

It frequently happens that the influence of a narcotic, even in large doses, almost entirely ceases. In this case we should suspend its use, and substitute another, a stranger, as it were, to the system. Afterwards, if we think proper, we can return to the former ; the system has lost its neutralizing power, and the medicine produces effects similar to those first obtained from it.

Another peculiarity which deserves mention is, that the substitute for the first narcotic, whose influence is exhausted, succeeds at times admirably, although it had failed on its experimental trial.

Experience has demonstrated that when the patient is strong and plethoric, narcotics succeed much better if their administration be preceded by venesection.

Much skill and continual observation on the part of the physician are required to properly manage preparations of such value in diseases whose character is, almost always, essentially nervous.

Finally, narcotics do not always agree, or at least their administration, under certain circumstances, requires precautions which are habitually neglected. Some constitutions have an extraordinary repugnance to this class of medicines, and even the smallest doses

occasion narcotism or a high degree of excitement. Not long ago, a lady resident at the Maison de Santé of Dubois took half a grain of extract of belladonna in a small enema; it produced a state of happy intoxication, similar to that from Champagne wine, which lasted the entire night.

Notwithstanding this extreme facility of being narcotized or excited, the use of sedatives must not be abandoned. However great the actual susceptibility of the patient, we are always able to make the dose so small as to produce no other than a sedative effect. For instance, we can begin by a half or even a quarter of a drop of laudanum in an enema. Lisfranc has, among his private patients, some whom he tranquilizes in this way. The constitution gradually gets habituated to the remedy; the dose is consequently increased, and it is not rare to see persons, who had commenced with fractions of a grain, come in time to take with impunity even a hundred grains of opium within the twenty-four hours.

10. *Blood-letting*. — When the disease of the genital organs is in an acute or sub-acute state, blood-letting is resorted to, most frequently, for its removal.

The first question which here presents itself is, whether the abstraction of blood locally or generally is a matter of indifference. It is an inquiry of the highest importance; and in relation to the diseases in consideration, appears to us to be very imperfectly understood. We will commence by an examination of local bleeding, and state the indications which should govern its employment.

(1.) *Local blood-letting*. — Whenever, says Lisfranc,

we are called to visit a patient in consultation, we most commonly find that leeches have already been applied. Have those, who advocate this local evacuation, carefully considered its consequences? May we not, without being over-hasty, charge them with blindly following a routine practice?

It is a fact well known to all practitioners, that the application of a small number of leeches congests the parts near to which they are applied. On this principle therefore we place upon the pelvis four or six leeches, and leave the bites to bleed a little, when we wish to congest the uterus and recall the catamenia.

But as to ourselves we go still further, and state, as a fundamental principle, that even copious local bleeding from the pelvic region congests the uterus, and in proportion to the frequency of its repetition. This organ indeed, being subject to a monthly determination, is so disposed to congestion, that the least irritation in its vicinity invites the blood thither, freely enough, in some cases, to amount to hemorrhage. This principle, so contrary to that of the advocates of local bleeding, is often tacitly admitted by them in practice. In metrorrhagy, for instance, is not the sole intent of the treatment to divert the blood from the uterus, to remove its congestion? Now did any one ever think of employing for this purpose local bleeding, in any quantity small or large? And yet is it not daily done in treating inflammation of the uterus, in which it is as necessary, as in the other case, to divert the blood from the uterus? This theory—which is based upon experience alone, as we shall presently see—derives additional strength from the following considerations furnished by other organs.

Sanguineous congestion consequent to repeated, and even copious local bleeding, is not confined to the uterus. It is remarked in other parenchymatous organs.

Costin, (*Thèse*, Paris, 1827,) has seen the repeated application of leeches to scirrhus breasts bring on pulmonary congestion — with palpitation of the heart resembling aneurismal pulsation — which was removed by venesection in the foot. Margot, (*Thèse*, 1826,) has observed cerebral congestion following the repeated application of leeches to white swellings of the thoracic limbs, and likewise removed, as by enchantment, by venesection in the foot; thus proving that the symptoms really depended on vascular determination, and not on nervous irritation alone. Similar facts have been observed in this hospital (*La Pitié*), and even in our service. Now the uterus, being habituated to periodical congestion, is, more than any other organ, disposed to engorgement under the influence of the slightest irritation.

On particularly questioning patients who have had leeches applied, even in large numbers, you will find that, eighteen times out of twenty, they complain of more heat, uneasiness, and weight about the pelvis. A few days ago we were called to a lady upon whom thirty leeches had been put; they had induced severe pain and even convulsions, although the bites had bled freely. If then each application of leeches produces a result so unfavorable, should it be continued as is done by the partisans of this method, who, with voluntary self-deception, attribute the new symptoms to the progress of the disease, rather than to the injudiciousness of the means employed?

Local blood-letting, notwithstanding, has had its occasional successes ; but the cases are very rare, and cannot outweigh such a majority of instances in which it has failed ; they can be considered only as exceptions.

Four or five years ago, being desirous to throw some light upon this point by direct experiment, we made, in this hospital, numerous and repeated trials of local and general bleeding. Ten patients with uterine disease were treated by venesection ; ten others, by leeches placed about the vagina. The former invariably improved more than the others, whose condition, generally, was aggravated by the local bleeding. These experiments were pushed very far ; our conviction on this point is, therefore, full and entire. Besides, reasoning would have led to the same conclusion. It is a principle of the physiological system, that leeches are more appropriate to inflammation of the membranous tissues, because they act principally upon the capillary system ; and general bleeding, to disease of parenchymatous organs. Now it is evident that the uterus is not membranous in its structure.

But how frequently has reasoning, apparently the most conclusive, led to wrong deductions in medicine ! Facts are necessary to establish the results of theory, and on this point we beg that nothing may be assumed *à priori*. Our sole wish is to invite attention to the subject, leaving these our opinions to be confirmed by experience. Will it be alleged, in opposition to the above facts, that the application of leeches to the very neck of the uterus is not followed by congestion ? This, however, is just the place in which their num-

ber cannot be increased at will; and even supposing that twenty, which is a large number, could be applied on so limited a surface, would the disgorgement be sufficient to remove and prevent determination to the part? We think not. In the second place, are not the leech-bites themselves formidable, if the condition of the neck be not perfectly healthy? We see these trifling wounds occasion local accidents in other parts, and why not in the cervix of the uterus? It is indeed insensible to the bites; but, after the leeches have fallen off, patients suffer severely; the lower portion of the uterus swells, appears œdematous, and ecchymosed; and at the same time it exhibits a remarkable degree of tenderness.

When this method of treatment was first ushered into the medical world with all the bustle which usually attends therapeutic novelties, Lisfranc made numerous experiments with it. They were, to say the least, as unsuccessful as the preceding, and under certain circumstances much more unfavorable in their effects. Thus, in those cases in which induration of the neck was beginning to assume a scirrhus character, the leech-bites formed so many cancerous ulcers. The same effect however occurs when leeches are applied to a scirrhus breast, if adhesion has taken place between the skin and the subjacent diseased gland. In support of this assertion, I will relate the following case which was communicated to me by Carron du Villards.

CASE. *Scirrhus engorgement of the neck of the uterus. Ulceration of the leech-bites. Cure. Speedy relapse. Death.* — “Madam Girod — wife of one of the

superior commissaries of the imperial army in Spain — of a sanguine temperament, lively, and exceedingly impressionable — very amorous — catamenia always regular — had had one child. For some years she had labored under engorgement with hypertrophy of the uterus, which indicated its existence, however, in no other way than by severe pain during sexual communication. This affliction, according to her a very serious one, induced her to ask medical advice. An examination furnished the following results; the neck was rounded, smooth, indolent, voluminous — its orifice almost entirely obliterated; the body of the uterus, of a moderate size compared with the neck, was inclined slightly backward upon the rectum. The speculum confirmed the opinions formed from touching, and, besides, showed a small notch on the os tincæ, which was judged of long standing and the effect of parturition. The color of the neck was normal, and its surface very smooth.

“The medical journals had just announced the efficacy of leeches applied upon the very neck of the uterus. This remedy was proposed to the patient and joyfully accepted; she was desirous of getting well at any rate. The operation was simple; and six leeches took away a large quantity of blood.

“Six days afterwards, the neck was somewhat softer; but the leech-bites were found to have become so many conoid, red ulcers, which were extremely painful when touched by a small mop. *General bathing — emollient injections — absolute repose of the genital organs.*

“Eight days afterwards, leech-bites in the same condition. From this time, says the patient’s physician,

I became seriously apprehensive of the result; something must be done to procure their cicatrization. For this purpose, I cauterized with the proto-nitrate, liquid acid of mercury some only of the ulcers, justly fearing that cauterization of the whole at once might excite inflammatory reaction. But, whilst I cauterized a part of them, the others gained ground. Nevertheless, by assiduity and time I succeeded in my object. Some months afterwards, and without any known cause, they ulcerated anew and in an alarming manner. Attempts at cauterization having entirely failed, I proposed amputation of the neck, as the last and sole resource. She steadily refused to submit to it; and finally died from the ravages of these ulcers with a cancerous character."

In short, we reject local blood-letting in every case of uterine disease in an acute or sub-acute stage. If, notwithstanding our views, any one should have recourse to it with the hope of obtaining antiphlogistic effects, the leeches must be applied in large numbers, and even preceded by a general bleeding, as is done in peritonitis when its character is any wise severe. To diminish their injurious effects, we advise their application behind the sacrum, because the veins of this region communicate less directly with those of the uterus. When women are fat, leeches abstract but little blood; their number consequently should be increased.

Taking the indications as a guide in the choice and administration of our therapeutic resources, we have stated the circumstances under which we abstain from local bleeding; we are now, on the contrary, about to

mention those in which we deviate from this line of conduct. Here however every thing is different, and the change is in accordance with our professed principles. We employ leeches about the pelvis,

1 — When symptoms of peritonitis coincide with the metritis. As the inflammation in this case has affected a membranous tissue, the indication is positive and natural.

2 — When the uterine disease has become chronic. Leeches are now prescribed, not as antiphlogistic, but as stimulating and resolvent. The diminished vitality of these tissues causes no perceptible change in them ; whereas, by determining the fluids towards, and congesting the diseased organ, we excite organic action and promote interstitial absorption. From the reasons stated above, it may be anticipated with what caution we should apply leeches, as a stimulant, to the neck itself, since in our opinion its organic structure has deviated more or less from a physiological condition. There is a third case in which local bleeding is indicated ; as, for example, when we seek by its means to recall the catamenia, or to assist their first appearance when the powers of nature seem ineffectual. In treating of menstruation, we shall point out the circumstances in which recourse may be had with benefit, or at least without danger, to this expedient.

Considering these our opinions upon local bleeding from the pelvic regions as well established, we shall pass to general bleeding, which we employ, exclusively, whenever the uterine affection has a sub-inflammatory character.

(2.) *General blood-letting.* The ancients justly ex-

tolled bleeding from the arm in uterine irritation. It empties the vessels of the uterus with so much promptitude, that it effectually arrests uterine hemorrhage; whereas, local bleeding increases it. This fact, which is too well known to need further remark, ought to awaken the reflections of the advocates for leeches in simple uterine congestion, and make them more consistent in their practice.

Venesection in the arm is essentially revulsive, because it empties the uterine vessels,¹ and its results prove it to be the most valuable therapeutic agent in the physician's hands. It is simply revulsive, or at the same time depletive, according to the quantity of blood drawn. We rarely have recourse to the latter unless the uterine inflammation is so acute as to determine general reaction; we also commence by a depletive bleeding, although the inflammation is only sub-acute, if the patient be strong, plethoric, and endowed with an excess of vitality. These cases excepted, we confine ourselves almost exclusively to revulsive bleeding.

¹ Some physicians regard bleeding merely as a means of diminishing the total mass of blood, and absolutely deny its revulsive action. This is the opinion of Hamberger, Quesnay, Freind, &c. The revulsive effect, however, ascribed to bleeding by Hippocrates and Galen, has been acknowledged by nearly all the great masters of antiquity. In diseases of the head, the first step with Hippocrates was to open the saphena vein. Boerhaave says *Emissio sanguinis revellit*. Bleeding, according to Haller, determines the blood towards the part from which the blood flows, and hence produces a revulsion from more distant parts. The same opinion may be found in the writings of Baglivi, Barthez, &c. Who has failed to notice the difficult respiration, and heaviness about the head, consequent upon a small bleeding from the arm? Do we not often attempt, by opening a vein in the foot, to congest the pelvis? The very cases, in which bleeding from the arm has been followed by the appearance of the catamenia, prove nothing against this doctrine; rather, indeed, add proof in its confirmation.

The quantity of blood, drawn at a revulsive bleeding, varies from one ounce to four and even six ounces ; it should, in every case, be governed by the condition of the patient's strength. Thus four ounces will effect revulsion merely, if drawn from one not yet exhausted by previous sufferings, or abundant fluxes, either red or white ; whilst it would be depletive to a patient in the opposite condition ; in this latter case, the indication would be fulfilled by drawing two, or even one ounce.

Physicians of the present day regard general bleeding, too exclusively, as depletive. They apparently forget that its action upon the system is also connected with the quantity of blood drawn.

They are not, however, totally unacquainted with the revulsive effect of bleeding, since they frequently open the saphena vein with this intention ; but then it is for diseases which have been combated by this operation from time immemorial ; and, until routine shall have, in a similar manner, consecrated revulsive bleeding from the arm in sub-acute disease of the female genital organs, this remedy will be frequently neglected.

It is not unfrequently objected by medical men, when we prescribe a revulsive bleeding, says Lisfranc, that the patient is weak, lymphatic ; in short it happens daily that patients, whom we have directed to be bled by their attending physicians, are not bled, because, judging from the state of the pulse, it was considered unnecessary. Their minds are preoccupied doubtless with the debility which, according to them, will inevitably follow an emission of blood, and, before

they can decide to open a vein, they require signs of fulness of the vascular system, or of general reaction.

But we repeat, and, considering the importance of the point, it cannot be too often repeated, our little revulsive bleeding does not perceptibly diminish a patient's strength. It is always in the physician's power to limit the quantity, so as to obtain the desired effect without prejudice to the constitution. Still further, the feebleness, being frequently dependent on sufferings which are wasting and destroying the patient by depriving her of sleep and ruining her digestive powers, is generally not a contra-indication; and not unfrequently it disappears under the influence of small emissions of blood, which destroy its source. Do we not daily see this same means restore to life women rendered nearly bloodless, and brought to the verge of death, by metrorrhagy?

These then are our principles; a small bleeding from the arm does not impair the patient's strength; determines the blood to the supra-diaphragmatic region; and acts as a revulsive to the pelvic organs. In resorting therefore to this evacuation, the physician should be governed, most generally, by signs independent of the state of the pulse.

The precise time of performing this bleeding is not a matter of indifference. Venesection should be practised immediately, if required to suppress a continued or an intermittent uterine hemorrhage. But the particular bleeding, which now occupies our attention and which is directed against an organic affection of the uterus, is employed after the following principles. It is not to be practised during the seven or eight days

which precede the catamenia, for fear of disturbing this evacuation, unless we happen to be dealing with one of those rare cases in which venesection determines to the uterus instead of acting revulsively.

If, when the catamenia have ceased flowing, pain or weight indicative of remaining congestion be felt in the pelvis, a revulsive bleeding twenty-four hours afterwards, accompanied by a small anodyne enema, dispels these symptoms, as if by enchantment.

If the pain, instead of following, precede the catamenia, the bleeding is to be deferred till the middle of the month. By determining the blood to the superior organs, less congestion takes place about the uterus, and there is consequently less pain on their approach. When pain, independent of menstruation, returns in the intervals, the bleeding may be repeated two or three times during the month. We have stated that feebleness is not a contra-indication.

Certain idiosyncrasies necessitate a modification of these principles. Thus we shall see, in treating of the means suited to recall the catamenia, that a bleeding from the arm, at the right moment, will frequently provoke their appearance in hearty women. With other women, even those who are quite weak, a revulsive bleeding determines an uterine hemorrhage. These are doubtless rare exceptions, but nevertheless they must not be lost sight of. A lady residing in St. Honoré street is one of these cases; the loss of an ounce of blood is sufficient to superinduce this peculiarity. Revulsive bleeding is of course to be given up, as producing an effect directly opposite to the one desired; for a still stronger reason should we abstain

from local bleedings, which would be yet more injurious.

Some women, who are constitutionally nervous, cannot be bled without serious suffering from derangement of the nervous system. We should endeavor to prevent this effect and we shall occasionally succeed, by diminishing even to one ounce, for instance, the quantity of blood drawn. If no nervous disturbance ensue, even this trivial loss of blood will be very beneficial; if the contrary be the case, venesection must be renounced.

With the exception of these cases, bleeding, conjoined with narcotics, is frequently a certain method of dispelling pain, by removing its cause; we may even say that very often it is the best narcotic. This idea however is not new. It had been previously observed by Stahl, that those affected by cancer always experience marked relief whenever the veins of the diseased part burst. It often happens, says Lisfranc, that in ward St. Augustin we prescribe a revulsive bleeding to twenty women at once. Fifteen of them at least are notably benefited; their pains cease or decrease for a longer or shorter period, unless its efficacy be deranged by extraneous circumstances, as agitating emotions, or a change in the state of the atmosphere. In this same ward we have kept alive, for two years, a patient suffering under an extremely grave affection of the uterus, tranquillizing her tortures less by narcotics than by small bleedings varying, according to her strength, from one to four ounces. We notice the same fact daily in private practice.

When the disorganization of the uterus is very far

advanced, and attended by a discharge of cancerous sanies, we must be very cautious of bleeding, doing it rarely, and in very small quantities, so as not to promote absorption of this matter. If also the patient be very weak, and exhibit indifference to what is passing about her, tendency to sleep, stupor, in short, the commencement of adynamia, bleeding would precipitate her death; it must not be practised on any account. Bleeding is also inadmissible in cases complicated by severe disease of the thoracic organs; by determining the blood to the supra-diaphragmatic region, we run the risk of accelerating its progress.

If venesection cannot be practised in the arm, either from some anatomical peculiarity or from an invincible repugnance to it on the part of the patient, circumstances equally rare, we may supply its place by means of a few leeches. They are to be placed upon the fore-arm, to the number of four or six, and the bites are to be allowed to bleed a little after the leeches have fallen off. The posterior surface of the arm is preferable, because less provided with nerves than its anterior face, and where the bites, being consequently less painful, more rarely give rise to erysipelatous inflammation.

Besides bleeding from the arm, it is also usual to open a vein in the foot; but the opening of the saphena is essentially adapted to congest the pelvis, for which purpose alone — this being its well known and undisputed effect — it is employed. Its prescription, therefore, is based upon the same indications as local bleeding, whether we seek to provoke the flow of the catamenia, or to stimulate a chronic engorgement.

11. *Cupping, vesication, &c.* — The remarks on local bleeding are equally applicable to these remedial means, with the simple addition, that the action of the latter is more continued. It is the same with other issues, such as cauterics, moxas, and setons. They can hardly be considered as suited to any but the chronic stage, either for the purpose of removing congestion unattended by pain, or for stimulating the vital properties of indurated, white tissues.

If, nevertheless, a slight irritation should have resisted every other mode of treatment, the deep issues, such as those last mentioned, are often of great assistance in its removal; and Lisfranc has frequently, by this means, succeeded in his object.

Cups, whether dry or scarified, are commonly applied about the pelvis; blisters, to the inner and upper part of the thighs; the seton is inserted in the walls of the abdomen, on a line with, and an inch within, the antero-superior iliac spinous process; cauterics and moxas, upon the lateral and inferior parts of the spinal column, never upon the sacrum as is sometimes done; — for, besides the difficulty of applying a retentive bandage to this region, these artificial ulcers act immediately upon the white, ligamentous tissues, producing very serious accidents, such as sloughing, exfoliation, and even caries of the sacrum; they occasion the patient much suffering, and the physician cannot always regulate their progress to suit his wishes. The last mentioned issues, when placed on the loins,¹

¹ In a lecture recently delivered at La Pitié, Lisfranc seems to have abandoned his earlier opinions relative to the region whereon to make the application of issues. On the loins, he then said, they are

are also very painful in consequence of the continual action of the sacro-lumbar muscles, over which they are applied. We must therefore be very cautious in their use. Frequently with nervous women, the general irritation which follows their application more than counterbalances their good effects. The seton is far preferable ; but patients have an aversion to it which is frequently insurmountable.

12. *Compression.* — This is an excellent remedy, but very difficult to manage ; it requires, in particular, a perfect knowledge of the indications. In chronic engorgement of the uterus, a cup-shaped pessary has been recommended, on the principle that the neck being received into its cavity, the uterus would be compressed by its own weight. But we must be very sure that there is no existing irritation of the vagina, bladder, or uterus, to be aggravated by the presence of this foreign body. We may establish a rule of guidance as follows ; if there be any pain or heat about the pelvis, the pessary is inadmissible ; and if, when put into place, it renew the pain and excite fever, even though the chronic stage is well established, it must be immediately withdrawn. Finally, when its use can be supported, it should be cleansed every two or three days ; for the secretions, being increased by the presence of a foreign body, and partially retained in the vagina, quickly decompose, become acrid, irritating, and would excoriate the neck, and even the mucous membrane of

very painful, &c. ; they are particularly troublesome in lying on the back ; it is therefore preferable to put them in the place advised for the insertion of setons, that is, on a level with, and an inch within, the antero-superior iliac spinous process.

the vagina. We shall enter more fully into the details of these effects in treating of pessaries.

13. *Drinks, and internal medicines.* — During the acute stage, emollient liquids are to be freely drunk; in the chronic stage, ptisans of soap-wort, meadow-scabious, dock, &c., and even the juices of these plants, if not offensive to the stomach. The quantity of the latter drinks may be limited to three cups daily, one at morning, noon, and evening, for fear of deranging the stomach. During this latter stage, we may also administer, internally, iodine, conium, and other resolvents; but, during their use, we must watch with the utmost vigilance the state of the digestive organs. Disease of the uterus is very frequently complicated with gastro-enteritis, sometimes latent, and sometimes so prominent that it obscures the principal disease; in this case resolvents are dangerous. We are so fearful of this complication, and our fears are founded upon observation, says Lisfranc, that we dare not administer even laxatives by the mouth. In the first place, we have never seen a case of uterine disease of any continuance, during whose progress the digestive organs have not exhibited symptoms of irritation; in the second place, thinking that this apprehension might be carried too far, we have attempted to persevere, and to employ resolvents, for example, in larger doses than usual; almost invariably symptoms have supervened which have forced us back to our original caution.

There is much less danger in the use of resolvent frictions with the hydriodate of potass, mercurial ointment, &c.; but we must always await the chronic

stage for fear of aggravating the inflammation, if any should happen to be present.

We shall conclude by a few remarks upon conium. Lisfranc employs it habitually, not as Storek did — who administered it in large doses, so as to produce symptoms of poisoning, and pretended that by its means he had cured diseases decidedly cancerous in their character — but in small doses, as resolvent and narcotic. In its exhibition, preference is generally given to the extract, yet not the least dependence is to be placed upon it. The vegetable extracts, obtained from three fourths of the apothecaries, are partially carbonized and worthless; and it is well known that Orfila swallowed thirty grains of them with impunity. Lisfranc prefers the leaf in powder, of which he gives a grain to begin with; at the end of fifteen days the dose is doubled, and successively increased to three and four grains. Occasionally it produces a little constriction in the throat, and even a slight diarrhœa. It must in such cases be stopped, and every precaution taken to prevent the supervention of gastro-enteritis. Many times, observes Lisfranc, in our unwillingness to be checked by these physiological views, we have attempted to continue its administration, but have always been obliged to revert to our original opinions.

Having frequently seen young physicians, at La Pitié, inquire about, and note down the general directions which are given by Lisfranc every Monday to out-patients with uterine diseases who come for advice, I thought it would be acceptable to terminate these general remarks upon the treatment with a copy of them, adding thereto some explanatory details which

are omitted at the hospital, but which are to be found in the directions given by Lisfranc in private practice ;

1 — Absolute repose ; to be taken upon a couch, or what is better, a settee, upon which the patient is to be carried, that the least walking may be avoided ;

2 — Thrice daily, morning, noon, and evening, injections of an infusion of marsh-mallows, nearly cold ; to be taken in a recumbent posture, the pelvis raised by a pillow, so as to make its superior extremity the lowest point ; a very beneficial local bath is thus formed about the neck of the uterus ; the injection is to be retained from five to ten minutes ;

3 — Daily, an enema of water nearly cold ;

4 — Twice a week, a general bath of hot water ; to remain in it two hours at least ; to discontinue hip-baths, if previously used ;

5 — Every day, three hours after eating, a pill containing one grain of the leaves of cicuta in powder ; at the expiration of ten days, a pill of two grains ; and successively, of three, and four grains. After reaching this last dose, its use is to be stopped for a fortnight ; and recommenced at the dose of a grain, and so on ;

6 — For drink ; decoction of soap-wort sweetened with the syrup of gum Arabic ; after some time, it may be exchanged to advantage for the meadow-scabious ;

7 — Eight days after the catamenia, a revulsive bleeding from the arm of four ounces ; to be repeated, if necessary, in the interval ;

8 — If the patient suffer severe pain notwithstanding the bleeding, she will find relief from the use of

small water enemata containing five drops of laudanum, and two grains of camphor previously beaten up with the yolk of an egg ;

9 — Absolute, unvarying repose of the diseased organs ;

10 — Diet ; vegetables, well ripened or cooked fruit, preparations of milk, fish, white meat ; for drink at meals, wine and water, Seltzer water ; abstinence from coffee, liquors, and all stimulating drinks. Quantity of food to be diminished first by one quarter, then by a third, and so on by gradual reduction, until barely enough is taken to support life.

Such is the formula by which Lisfranc generally commences treatment, and which — the supplementary details excepted — I have myself distributed or seen distributed, for nearly three years, at the weekly consultation at the hospital La Pitié, under all circumstances except incurable cases ; in these, the treatment was limited to injections of conium, small sedative enemata, and, from time to time, a small revulsive bleeding from the arm.

In private practice, when nothing but engorgement of an essentially chronic character remains, the formula is somewhat modified. Thus, instead of absolute repose, moderate exercise is recommended ; two or three ounces of the purified juices of the water-cress, dandelion, scurvy-grass, betony, &c., are to be taken every morning ; the emollient injections are exchanged for injections rendered resolvent by the addition, at first of a fourth, and then of a third of the mineral water of Baréges, the quantity of this latter being regulated by the activity which we wish them to possess ;

resolvent frictions are made about the pelvis. Finally, if the engorgement persist, if pains of considerable sharpness recur in spite of the remedial measures hitherto employed, Lisfranc has recourse to issues, as a more powerful agent. It is of course understood, that ulcers require some additional treatment and, in general, cauterization, of which particular mention will be presently made.

VI. THE MOST COMMON COMPLICATIONS OF UTERINE DISEASE IN ITS DIFFERENT STAGES.

Whether disease of the uterus be simple or complex, whether it affect a part only or the whole of the organ, accidents or complications supervene. Among these may be enumerated complete amenorrhœa, metrorrhagia, leucorrhœa, hysteria, tubercular diseases, different disorders of the intestinal canal, rheumatism, gestation, hemorrhoids, and pruritus of the vulva.

As the first four diseases will form the subjects of special articles, we simply mention them here, and pass on to the next in the list.

Tubercles. — Nothing is more common than to see diseases of the uterus complicated by phthisis, or the developement of tubercles in the liver or mesentery. The presence of tubercular matter in organs of such importance as the lungs and liver is an unfavorable indication; and, in this case, the physician should communicate the patient's danger to those interested. It is not uncommon to see women, who either have been cured, or are upon the point of being cured, of an affection of the uterus, die within a brief space, from

the rapid strides of tuberculous disease. The tuberculous tumors which form about the uterus and its appendages, and which sometimes suppurate and open into the vagina, groins, or iliac fossæ, are generally owing to enlargement of the mesenteric ganglia.

The sympathetic connection between the thoracic organs and those of generation is very intimate. We have frequently observed that uterine and pulmonary diseases mutually modified each other in an inverse ratio; thus the rapid progress of the pulmonary symptoms is frequently in the ratio of the amendment in the pelvic organs. The wife of an advocate had a tumor, which was considered tuberculous, in the substance of the posterior lip of the os tincæ; when it was nearly cured, cough with some embarrassment in respiration supervened. Lisfranc recommended exercise, even on horseback, to recall the irritation towards the uterus. From this time the pulmonary affection improved daily, whilst that of the uterus grew worse.

These facts are the more deserving of consideration, as it is rarely possible to supersede with advantage, by artificial means, the morbid irritation in the uterus. Issues have not been attended by any satisfactory results, in the experience of Lisfranc.

It often happens that there is no apparent disease about the chest, until the treatment of the uterine disease commences, and then it developes itself. In such cases, it is the part of prudence not to attempt to cure the pelvic disease. Although in itself a severe affection, it is far from being so dangerous as an organic alteration of the lungs, towards which it acts as a powerful derivative. The physician should confine

himself to moderating the most alarming symptoms, so as to prolong to the utmost the life of his patient.

Diseases of the alimentary canal. — Deranged digestion, cardialgia, and chronic gastritis complicate, unhappily too often, uterine affections; the sympathy between the stomach and uterus is so close, that the former cannot escape suffering from the diseases of the latter. The affections of the alimentary canal — unless it be itself seriously diseased — are not a formidable complication. The existence of chronic gastritis or enteritis embarrasses the treatment, or necessitates its modification, and in general renders the disease much longer and more intractable. Obstinate constipation, quite a common symptom in diseases of the uterus, is not unfrequently suddenly followed by diarrhœa, resulting from sympathetic irritation of the rectum. This complication is to be carefully watched, for diarrhœa rapidly wastes the strength and hastens the death of the patient, even though the uterine disease be not in an advanced stage.

Rheumatism. — Rheumatic pains are frequently associated with diseases of the uterus. Although not dangerous, they are almost always injurious, not only by the suffering and distress which they occasion, but also by contra-indicating the use of a number of remedies more or less useful, such as the prolonged bath, the douches, &c. They may either have existed previously to the disease, or may supervene during its course. Rheumatic pains must not be confounded with numberless neuralgic pains, generated by the uterine disease itself and usually ceasing with the cause which maintains them. They may, it is true,

become worse under the influence of the diseases in question, but they very rarely disappear with them.

Gestation. — Pregnancy may take place during the existence of chronic inflammation of the uterus, indeed even when simple hypertrophy and white engorgement are present. It may also supervene during the first stage of scirrhus; instances of the kind have been reported by different writers; among others by Cruveilhier in an article entitled, "*Clinique medicale de l'hospice de la Maternité*" (Journ. hebdomadaire). These facts however are quite rare.

Pregnancy is almost always a serious complication of uterine disease. Immediately after impregnation — the product of conception being grafted upon the uterus by a mechanism perfectly similar to the union of the two edges of a solution of continuity — a developmental action, which increases each day, is set up in the uterus and fecundated ovum. In consequence of this determination towards it, the uterus is in a state of hypertrophy which may be termed physiological. Now the superposition of this activity in an organ already diseased must, it is evident, produce an increase in the local and general phenomena. After the expulsion of its contents, the uterus almost always contracts more slowly than in ordinary cases; the puerperal engorgement persists, and the pathological alterations in the organ are aggravated. It has been noticed that, in the larger number of cases, the placenta adhered to the most diseased point of the uterus. Now if we reflect, that pregnancy often inflicts fatal injury upon the constitutions of those whose previous health had been good, and that it is still more likely to produce such an effect where the health has

suffered, we shall be convinced how necessary it is for women, affected by uterine disease, to beware of placing themselves in those relations, which render impregnation possible.

We not unfrequently meet with physicians who advise pregnancy, as a means of curing disease of the uterus; they say, that pregnancy will replace the uterus, when it is beginning to descend lower into the pelvis in consequence of its engorgement. But, in the first place, conception, especially during the existence of organic alteration in the uterus, will not always take place directly and at the precise moment it is desired; and the frequent repetition of the act, indispensable to its attainment, increases the preëxisting irritation. Supposing pregnancy to ensue, the disease in the uterus may be removed, from conception acting as a resolvent; but, if much irritation exist, the excitement caused by pregnancy more frequently aggravates the condition of the organ. This excess of irritation is the more to be regretted, as fear of abortion often prevents the employment of appropriate means of reducing it. Finally, we have already had occasion to notice the frequency of abortion, consequent to disease of the uterus.

Hemorrhoids. — This very common complication is the source of much suffering, particularly on the approach of the catamenia. At this time — the recto-vaginal veins being a common system — the hemorrhoids are congested, cause tenesmus, and sometimes protrude. These circumstances act very unfavorably; they render the introduction of the enema-pipe extremely painful; and, sometimes, the rectum is irritated to such a degree as to reject the enema, especial-

ly when it contains an opiate. Patients are thus deprived of a medicine by which their sufferings might be much diminished. Finally, hemorrhoids may ulcerate; they may cause diarrhœa, abscesses about the anus, fissures, &c.; these accidents are the more serious, because they congest the pelvis by their own irritation, and thus favor the preëxisting uterine disease.

Pruritus of the vulva. — This is of frequent occurrence in uterine diseases, either during their course or at their commencement; and yet not the slightest local inflammation can be found to explain it. The pruritus is most commonly quite endurable, but at other times it is so intense, that it throws the sufferer into a nervous state altogether indescribable. Besides the general excitement, occasioned by this disturbance of the nervous system, women are forced to scratch, it might almost be said, to rend the external parts of generation, to destroy this painful sensation. So imperious is the necessity of scratching, that, when surprised by a paroxysm of the disease in the street, the unhappy sufferer frequently seeks some retired alley where she can indulge it unrestrainedly.

Independently of these annoyances, pruritus of the vulva is a new point of irritation in the pelvis; the indication is to destroy it. It sometimes yields, in a surprising manner, to a small revulsive bleeding from the arm, the action of which may be aided by a bath, by lotions of water and bran or of the mineral waters of Barèges; finally, Lisfranc has always found it to give way to sulphurous fumigation.

Pruritus of the vulva is not specially connected with any disease of the uterus.

PART III.¹

CHAPTER I.

MENSTRUATION.

EXCEPT during pregnancy and the first months of lactation, women generally, from puberty till the period at which they cease to be apt for conception, are subject to a sanguineous excretion, of monthly recurrence, from the genital organs. The periodicity of this evacuation, which thus denotes the age of fecundity, has caused it to be designated by the terms *catamenia*, *courses*, *menses*, *flowers*, *times*, &c.; each woman, from feelings of modesty, indicates it in such an ambiguous manner, that her embarrassment is frequently a better guide, than her words, to her meaning.

This excretion is observed in almost all women, without distinction of race. Damien, the traveller, did indeed make a gratuitous exception in favor of the women of the arctic circle and the aborigines of Brazil.

¹ In accordance with the arrangement of the lecturer, we shall include, in this third part, menstruation and its derangements, menorrhagia, leucorrhœa, and hysteria, considered as causes of organic disease of the uterus. Our remarks, mainly, will be the special results of his observation and practice.

More correct observers, however, have proved him to be wrong. His error arose, doubtless, from the scanty quantity and the infrequent recurrence of the evacuation among women in a savage state and using a great deal of exercise.

The epoch at which menstruation commences varies much, according to climate, constitution, and mode of life. It generally appears at puberty, when the system has nearly acquired its full developement. The period is earlier, the nearer we approach the equator; thus it is not uncommon, in Asia, to see girls nubile at eight or nine years of age. Cadija, who menstruated when five years old, was at this age affianced to Mahomet, and, in her eighth year, was admitted to his bed.

In northern countries, on the other hand, the appearance of the menses pursues an inverse order. The function does not commence here, until from the fifteenth to the nineteenth, and, in mountainous regions, even to the twenty-fourth year.

Temperate climates exhibit a mean between these two extremes. Menstruation is ordinarily established at the age of twelve, fourteen, or fifteen years. Numberless varieties, however, are observed in the same province according to localities. Fodéré mentions the striking difference in this respect, between the young girls inhabiting the Alps, according to the southern or northern exposure of the mountain-sides on which they dwelt. The variations hitherto mentioned are dependent on the greater or less elevation of temperature. There are others connected with the mode of life, constitution, physical and moral education, and sometimes

with certain pernicious habits. Menstruation is more backward in the country. The habitation of large cities, a sanguine, and especially a nervous temperament, nutritious food, the use of spirituous liquids, and, at this age, every thing that excites the imagination, such as balls, visiting, romance-reading, are so many causes which hasten the first appearance of the menses and make them anticipate, as it were, their natural period of evolution. It is not uncommon to find, in Paris, girls who menstruate at nine or ten years of age. Haller mentions a young Swiss girl, nine years old, who gave birth to a child. There are also cases on record of precocious menstruation in children of the tenderest years, and even at birth; there is, however, every reason to conclude that this discharge was in no ways connected with the monthly secretion.

In our climate, the epoch of the first menstruation is from the twelfth to the fifteenth year of age. Oslander found that the mean age, in the environs of Göttingen, was fourteen years.

This evacuation, when once established, is renewed about every month — except during lactation and pregnancy — as is indicated by the different names which it has received. With some women, the return of the catamenia coincides with the changes of the moon; hence the reason why some authors have attributed to this planet a direct influence upon the periodicity of the evacuation. Aristotle, who advocates this idea, also maintains that all women of the same age menstruate at the same time. Vanhelfmont, likewise, admits a coincidence between the return of the catamenia and the moon's revolution. Even Roussel is not

without some leaning towards the old and popular belief, that this planet exercises over menstruation the same influence which it does over tides. These opinions — which have almost become proverbial, as expressed in the following line,

Luna vetus vetulas, juvenes nova luna repurgat —

are not confirmed by observation. Instead of being in relation with the lunar month, a number of authors, among them Haller, are of opinion that it coincides with the solar month.

Many women are met with in whom the catamenial return anticipates even the lunar month. With voluptuous women, it sometimes recurs as often as every fortnight; whilst, with those of an opposite temperament, the interval is six and even eight weeks. In Lapland, Linnæus saw women who menstruated once a year only.

Gall, without admitting the influence of the planets, establishes it as a general principle, based on numerous facts, that women menstruate at certain parts of the month, and at certain others do not menstruate. He thus divides them into two classes; the first includes those who menstruate during the first seven days of the first fortnight; the second, those who menstruate during the first seven days of the second fortnight. There are always some who, from accidental causes, do not come within either of these terms; but, according to his idea, they take their place, after some months, in the class to which they belong. He acknowledges himself ignorant of the reason of this general menstruation at two different periods.

But whither do these explanations — which are always useless, and frequently unfounded — tend? Medicine, like natural history, should be confined to a strict observation of facts, without wasting time in frivolous and ever changing explanations. Not content with this, attempts have even been made to penetrate into the very causes of menstruation. The field is a vast one. But the numberless theories, which time has brought forth, far from resolving the difficulty, rather give a description of the phenomenon itself, than explain its cause.

It was once believed that, in the intervals of menstruation, the blood accumulated drop by drop in the uterus, which, when distended to a certain degree, allowed its escape at fixed periods. For this purpose cells were supposed to exist between the veins and arteries. Astruc considered the veins themselves — which he termed cœcal appendages, and others, uterine sinuses — as the reservoirs in question. On this point the opinion of modern days is settled. Physiology now sees, in menstruation, nothing more than a sanguineous exsudation from the internal surface, and principally from the body of the uterus. By means of the speculum, the blood can be seen issuing from the uterus. Finally, examination of the internal surface of the uterus when everted, the accumulation of blood in its interior when prevented by a physical obstacle from flowing outwardly, and finally, the necropsy of those who have died whilst menstruating, have removed all doubt on this point.

It is, also, generally admitted, that the catamenial discharge may be furnished by the interior of the neck

and vagina; this circumstance accounts for its continuance, in occasional cases, during pregnancy. There was recently at the hospital (*La Pitié*) a woman, whose vagina, at two inches distance from its orifice, had, from some accident, become totally obliterated. When menstruating, any one could convince himself, by means of the speculum, that the blood was oozing from the entire surface of this superficial cavity.

It will be useless to enter into an inquiry whether the blood be supplied by the veins or the arteries; by the glandular follicles, according to Lister; or by the perspiratory extremities of the capillaries, according to Highmore, Winslow, and Meibomius. The function remains the same, whatever may be the secreting part; all else is of very secondary, and even of no importance.

The duration of the flow, which is generally the same at each period with the same woman, varies much in different individuals. It is generally limited within from five to eight, though its average continuance may be considered as four or five days.

Its quantity, also, varies much in different individuals. It is observed that a return, in which the flow has continued longer and been more abundant, frequently alternates with another of shorter duration and less copiousness.

The difficulty of collecting the blood and the variations in its secretion have rendered it very difficult to form a correct estimate of its quantity, which, moreover, is not equally divided between each of the days during which the period lasts. The flow is, ordinarily, slight on the first day, increases the two following

days, and then diminishes. Sometimes, even, it stops, and reappears again at the expiration of a day or two.

Opinions are totally at variance in relation to the influence of climate upon the copiousness of menstruation. Some writers state that the catamenia are less abundant at the south, where women sweat profusely, than at the north. Others, on the contrary, maintain that their copiousness increases in proportion to the heat of the climate; insomuch that almost all European women, who go to Batavia, die there from excessive menstruation. This fact has no value, however, unless we know whether excessive menstruation is common with the native women. Though the influence of climate upon this secretion is not well determined, it is not so with the mode of life. It is more abundant in women resident in cities, leading an indolent life, and consuming nutritious food, than in women of the country under opposite conditions.

Hippocrates estimated at eighteen or twenty ounces, the quantity of blood lost by the Grecian women at each period. Freind makes it the same for England. According to Fitz-Gerald, it would be fourteen or fifteen ounces for Spain; and in Holland, Gorthor states that it would not exceed six ounces. Haller reckons it from one to eight ounces according as the woman dwells in the country or city. In France, according to Astruc, it varies from eight to sixteen ounces, but, from three to four only, according to Baudelocque. Magendie exceeds all his predecessors; he says that the quantity of menstrual blood is frequently very considerable, and may amount to many pounds.

We thus see the discrepancy of opinion, among

physiologists, relatively to a fact which is, in itself, very variable.

Very different ideas have been entertained as to the qualities of the menstrual fluid. There is every reason to believe it of the same nature as the blood supplied by any other part of the body. Hippocrates and Galen compare it to the rapidly coagulating blood of a victim. Some physicians have thought that they could detect the odor of saffron in it ; and Haller attributes its occasional viscosity to a mixture of mucus. According to Dionis it contains no fibrine, and many accoucheurs have laid great stress upon this peculiarity, as fitted to distinguish the catamenia from menorrhagia occurring during pregnancy. Some experiments of Lasagne, though few in number, would seem to give some validity to this opinion. If the blood, accumulated in the cavity of the genital organs of girls with imperforate hymen, has been liquid, black, and pitchy, so likewise has it often seemed mixed with coagula. And, moreover, do we not daily see the blood issue forth in clots, more or less abundantly, at each menstrual period, and more particularly after a woman has been sitting or lying down for some time ?

From remotest antiquity, noxious and baneful qualities have been attributed to the menstrual blood. By the Levitical law, women, during the catamenial flow, were forbidden entrance to the temples and intercourse with their husbands ; nor was either permitted, after its stoppage, until they had previously been purified. Similar customs also exist among certain tribes in America. Le Vaillant relates that, in different parts of Africa, the women and girls, in this state, are obliged

to live apart and even to wear a badge by which they may be known and avoided. These ancient prejudices, recorded by Pliny and the Arabians, cannot reasonably be adopted in our day, though it is impossible to deny that they are founded on fact. The blood exhaled mingles with the mucus secreted by the inner surface of the genital organs; if it remain any time whatever in their cavity, to which the external air, moreover, has access, it decomposes rapidly, and diffuses a disgusting and fetid odor. This circumstance, though uncommon with the residents of cities, whose habits are extremely nice, is frequently met with among nasty women, and especially among the peasants, who, generally speaking, never take the slightest pains to keep these parts clean. It is not, therefore, very astonishing that the proximity of these disgusting women should have an influence upon liquids easily rendered morbid.

May not the gonorrhœa, which many women communicate at this period only, be attributed to the acridness of these secretions?

Hitherto, we have spoken of secondary objects only, it is true, though a knowledge of them is not wholly uninteresting to the practitioner. If hypotheses upon the cause or periodicity of menstruation are but of little importance to him, it is not so with the pure and simple phenomenon, the minutest details of which are to be noted, to enable him to judge when its absence, or its too long continuance, or its irregularity of return, &c., constitutes a pathological state and requires treatment. In this manner only shall we know the changes which it impresses upon the constitution, the

disorders which it may originate, and especially the course of treatment suited to prevent, arrest, or advantageously modify the numerous accidents which ordinarily follow deranged menstruation.

1. *First appearance of the catamenia.*—The first menstruation is ordinarily preceded by remarkable changes in the constitution, changes which characterize the state of puberty in woman. From the development of the cellular tissue, the skin is smoother, and its color brighter; the limbs acquire increased roundness; the forms are, every where, defined by more swelling outlines; the breasts develope and the chest expands; the circulation becomes more active and gives a deeper tinge to the cheeks; the voice is sweeter; the eye more expressive and tender; the external parts of generation are garnished with hair. The moral system of the girl also experiences changes more or less perceptible. She is agitated by a general sensation of uneasiness; and oftentimes suffers from sadness and melancholy; she is more timid; and loves to be alone, as if nature invited her to commune with herself upon the important part which she is, henceforth, destined to play.

At this time, a determination takes place towards the pelvis as a centre, and is announced by a series of phenomena. From sympathy with the organs of generation, the breasts swell and harden; heat, tension, and weight are felt about the hypogastrium, and a slight pruritus in the genital organs, signs indicative of their vascular congestion. These prodromata are followed by a glairy discharge at first, which is afterwards tinged by blood; the state of things then be-

comes normal until the following period. These first phenomena, however, often disappear without being followed by any evacuation whatever. The next month, they reappear with increased intensity; and, frequently, it is not until after many periods have passed, that the catamenia, hitherto quite irregular, become firmly established and assume that regularity which they are in future to maintain. Sometimes, after a first appearance, they do not return again for many periods. Nature struggles to bring about those modifications in the uterus, which are necessary to the evacuation; after repeated congestions, the blood by which it is engorged finally escapes, and the organ returns to its normal condition. The same phenomena are not observed in all young girls; in some, they are scarcely perceptible; whilst others, still more fortunate, are not aware of their new condition, until warned by the sanguineous flow from the genital organs.

In other cases, on the contrary, and quite frequently too, the establishment of this secretion requires more active efforts still on the part of nature. To the precursory phenomena above mentioned, succeed pains more or less severe in the loins and throughout the abdomen, and lassitude in the lower extremities. As in hemorrhagic erethism of whatever kind, a general reaction commences; the face becomes red, flushed, and, frequently, covered by cutaneous eruptions. To these symptoms are joined heaviness of the head, headache, and stiffness in the muscles of the neck; the pulse — which is, ordinarily, faster and fuller than in the natural state — beats perceptibly irregular, though less so than the pulse of nasal hemorrhage. When-

ever these symptoms acquire any degree of intensity, they constitute a disease known by the name of *dysmenorrhœa*. If the menses, after this excitement — which may precede them by forty-eight hours, or even by many days — flow in sufficient quantity to empty, to deobstruct the uterus, the storm is lulled, and the health of the maiden is no longer in danger. In the opposite case, and more especially if no flow at all ensue, the uterus becomes the seat of an engorgement which each period increases, passes to a morbid condition, and quickly reacts upon the rest of the system, as we shall hereafter see.

When the catamenia are upon the point of making their appearance for the first time, and their approach is indicated by precursory symptoms, how is the physician to proceed? Is he to administer stimulants or drastics in every instance, without reference to any other circumstance than the mere absence of this secretion? This course might be successful in one case, but it would do mischief in twenty others. The treatment suitable to a strong and plethoric woman would, on the contrary, be very injurious if she were weak and delicate, and *vice versâ*. It is, therefore, of the utmost importance accurately to establish the indications, in order to pursue a method of treatment which shall conform to them. This has been done by Lisfranc.

In the first place, study attentively the temperament, the constitution of the young girl.

1 — If she is strong, in good health, and every thing seems to promise favorably, leave to nature the management of this new function; interference will but

embarrass her progress ; she requires assistance only in cases of necessity.

2 — But if she is weak and delicate, with tissues flaccid and soft, and has reached the age at which it might be presumed that the menses would make their appearance, without scarcely feeling their precursory symptoms, inaction would then be injurious. It is important to her future health to provoke them by general measures, intended to modify her whole system, and by local stimulants, which shall determine the blood to the pelvic organs. We should not attempt to anticipate nature, but wait until precursory symptoms give warning of the approaching change ; and then let the young girl, if her digestive organs are sound, be put upon a diet of very nutritious food, and the use of mild tonics. Cold bathing, aromatic baths, exercise in the open air and in the sun, will be found to be powerful adjuvants.

This regimen is equally appropriate to those fat, dull girls, of a flabby, lymphatic constitution, whose muscles have no energy, and whose wills no vigor. Here, in particular, we must insist upon cold bathing, and exercise of all kinds, to give elasticity to the body, and liveliness to the imagination.

In these cases, we may also employ with advantage local means, sinapized foot-baths ; foot-baths of the decoction of mugwort or wormwood ; aromatic fumigations ; small and very hot enemata ; warm injections into the vagina, when the hymen will allow it — small local baths formed in the vagina by elevating the pelvis ; emollient hip-baths ; warm cataplasms about the pelvis, and over the vulva, made, more particularly, of

the pulp of potatoes, which retains its heat for a long while; dry and scarified cupping in the vicinity of the generative organs; flying blisters; the occasional application of a small number of leeches about the ancles, on the legs, on the inner and upper part of the thighs — rarely at the vulva; small bleedings from the foot, &c. In order to obtain the utmost benefit from a foot-bath, Lisfranc recommends that the water be sufficiently deep to cover the leg as high as the knee — experience having convinced him that those pediluvia, in which the feet alone are immersed, are rather injurious than useful.¹

3 — If, instead of being delicate, the girl is strong, plethoric, and suffers from pain in the loins, and weight and dragging in the pelvis — symptoms indicative of

¹ With ergot, in doses of five or six grains a day, I have fully succeeded in establishing the catamenia in cases of amenorrhœa, even accompanied by engorgement; and with uniform benefit to this latter pathological condition. (See article *Engorgement*.)

The preparations of iron and of iodine have, by turns, had their day. I have seen many cases of amenorrhœa yield to the internal administration of the cyanuret of gold, employed by Carron du Villards. His formula is, to dissolve three grains in eight ounces of water containing a few drops of alcohol. Beginning fifteen days before the presumed return of the menses, a tea-spoon-ful of this solution is administered morning and evening; then two, then three, and so on. (*Bulletin théér. du* 15 Oct. 1835.)

Doctor West, of Soult, reported in the *Archives générales* of medicine three cases showing the efficacy of aconite. He makes use of the watery extract in the dose of a grain, gradually increased so as to amount to eight grains on the usual day of menstruation. — In an extreme case, we might use the small suction pump upon the very neck of the uterus (*Amussat*); or, which is preferable, make application of leeches to the same place. Rostan states that he has derived great benefit from the latter. Finally, mention has been made of electricity applied to the vulva, and of a galvanic current directed through the urethra.

uterine congestion — the preceding treatment would be very injurious and inflammatory. In this case, nature is too active. We must now prescribe warm bathing, frequently repeated, and prolonged for two or three hours. The diet must be vegetable, and somewhat restricted. Exercise should be moderate, so as not to overstimulate. Finally, about the epoch of the menses, beneficial results may be expected from small bleedings from the arm, to the extent of four or eight ounces according to individual strength.

2. *Absence of menstruation.* — Some women never menstruate. Are they capable of bearing children? Instances of the kind have been cited ; but, even supposing them to be authentic, which is not the fact, they are exceedingly rare. The menstrual flow is, indisputably, the indispensable condition of fecundity in women. We know no fact which may induce us to admit an opposite possibility. This assertion, it is evident, is not meant to include those young girls who have not yet menstruated, but with whom the function is about to commence ; we here speak solely of women of a certain age, who have passed, by many years, the epoch of their first menstruation.

We see then that there are women, who do not menstruate, and who yet do not labor under any physical obstacle, or organic, chronic disease, to explain the deficiency of a secretion, which, in the majority of cases, appears to be inherent in the very nature of woman. Within ten years, Lisfranc has witnessed fourteen cases of the kind. The therapeutic indications, which arise from this peculiarity, will be stated.

The constitutional modifications, resulting from this deficiency of menstruation, are by no means the same in each individual. We know some, says Lisfranc, who at each return of the menstrual period become sensitive, irritable, and pettish ; they experience giddiness, a sense of suffocation, a feeling of tension, of weight in the pelvis, &c. — symptoms which precede, in many cases, the return of the catamenia. Then, without the occurrence of any flow, all these phenomena subside, and disappear until the ensuing period.

With others, on the contrary, a different train of phenomena exists. They reach a certain age without experiencing any periodical indisposition ; but their general health is usually poor ; they are more or less thin in flesh ; their tissues are soft, flaccid, and colorless ; the yellowness of their skin indicates suffering ; and they are harassed sometimes by colic and diarrhœa, and sometimes by palpitation, difficulty of breathing, headaches, &c.

What is to be done under these circumstances ?

Some physicians attribute these phenomena to the peculiar organization of the individual, and observe a course of philosophical inactivity ; others, seeing no other cause of disorder than absence of the catamenia, seek to recall them by every possible means. The latter do more harm than good. By determining the blood to the uterus, they increase the congestion usually existing in this organ. The sufferings of those, in particular, who have periodical pains, &c., increase, often indeed persist from one epoch to another, and no longer leave an interval of repose. If no congestion previously existed, their treatment would create it ;

and would thus develop a new source of suffering, without any corresponding benefit to the preëxisting affection.

Whilst we censure the injudicious conduct of the latter, we are far from commending the inaction of the former. By leaving these affections to themselves, we incur the hazard — if the deficiency of the menses be owing to uterine congestion — of this congestion becoming each day more aggravated, and finally inducing degeneration of the uterus; and if this organ, from unknown causes, is not or has ceased to be a centre of determination, have we not reason to be alarmed for the safety of other organs?

It is especially important to ascertain the condition of the uterus, in which the cause, preventive of the establishment of the menses, can sometimes be found. By removing its congestion, Lisfranc has twice succeeded in bringing about regular menstruation; of these women, one has since become a mother. We have here presented the most favorable result of treatment — the establishment of menstruation; but, even though we may not succeed in accomplishing this object, we at least cure the disease in the organ, and that is a great advantage. We can thus preserve, for an indefinite length of time, a good share of health, as in the following cases.

If there be no uterine engorgement, and a number of years has already elapsed without any appearance of the catamenia, they may generally be considered as lost beyond recovery. Some insuperable obstacle, either in the constitution or in the organ itself, is opposed to their restoration, of which not a hope remains.

But shall these individuals, therefore, be left to suffer unaided? Certainly not.

In this emergency, Lisfranc has found it of benefit to imitate nature and supply her deficiency, by artificial emissions of blood. It is a matter of some importance to await the indication of time. With women in good health and regularly menstruating, the *hemorrhagic molimen* which precedes the evacuation occurs about every month; the proper time to act, therefore, is at similar periods. Thus, when the return of pain announces a menstrual epoch, the time is designated. Blood to the amount of four or six ounces should be taken from the arm, or else four or five leeches applied to it for several successive days, the bites being allowed to bleed. These emissions of blood have the double advantage of serving as an evacuation, and of acting as derivatives relatively to the uterus. To the bleeding may be joined tepid general bathing, moderate exercise, a mild, cooling diet. The diet, however, should be regulated by the constitution; thus, with feeble women having healthy digestive organs, it may be nutritious, and combined with tonics. When the nervous system predominates, we shall find it well to employ narcotics in enemata and by friction, and slightly acidulated drinks.

When the pains, instead of returning periodically each month, are continuous, the indication is precisely the same. An occasional aggravation of the symptoms may still determine the time of action, by indicating a corresponding period of menstruation; but, in the contrary case, we must make a period, and, at each return of it, put into practice the measures we have just

specified. As, in the present case, we have to produce a great revolution in the constitution, the treatment will necessarily be of long continuance, extending from many months to several years ; but, by persisting in these principles, we shall rarely fail greatly to diminish, or even entirely to remove the pains.

With this total deficiency of the catamenia is naturally connected their periodical absence for a longer or shorter interval. Lisfranc has met with cases in which they occurred only every five or six months, every three, four, and even six years. Sometimes, in these cases, there is continual suffering, and then the indication is the same as when the menses are entirely deficient ; sometimes, there is every appearance of perfect health. This however, it is to be feared, is but a delusive tranquillity — although it may continue for some time — and merely serves to mask a dangerous affection — as disease of the heart, or latent peritonitis, or some chronic alteration of the pulmonary organs — which will display itself at a later period. Lisfranc knew three young women, who had never borne children and who menstruated very rarely ; one of them died, at the age of twenty-one years, of an aneurism of the heart ; the two others, at nineteen and twenty-four years of age, of tuberculous phthisis. Was the derangement of the catamenia cause or effect in these cases ? We shall incline to the former opinion on reflecting that, in earlier life, these women had exhibited no symptoms of the diseases of which they died, and that they came on only as a consequence. Is it not of daily observation, that the regular establishment of the catamenia causes the disappearance of serious disease

in other organs? We shall have occasion, hereafter, to revert to the close sympathy which connects the pulmonary and generative organs. From all these considerations, we think it useful to bleed revulsively from the arm, from time to time, and to direct an appropriate diet. We have followed out this principle with great benefit, in many cases; one, an individual thirty-six years of age, who had not menstruated for six years, enjoys by means of this precaution very good health. To do nothing in similar circumstances would, at least, be a fault. That brilliant health, which deceives the patient and oftentimes the physician, is only of ephemeral duration, and soon disappears before diseases, which it would have been easy, and certainly more rational, to prevent.

3. *Painful menstruation.* — This variety of menstruation is one of those comprehended in the *Dysmenorrhœa* of authors. The catamenia, even though regularly established, are not always exempt from unpleasant accompaniments. With many women, their periodical return is preceded by intolerable pain, which comes on some hours previous to the flow, and lasts for some hours and even for one or two days after it; sometimes, indeed, it persists as long as the flow continues. We can easily conceive how liable the uterus is to disease, the consequence of such a congestion occurring monthly for a series of years. The pain, even when of a purely nervous character, occasions a determination of blood to the uterus; and we are not to suppose, that each menstrual discharge so completely evacuates the organ, as to leave behind it no germ or fresh increase of congestion. This effect, indeed, has

been observed by Lisfranc a number of times. He has noticed, that painful menstruation is almost always hereditary ; and on inquiry it will be found, that other members of the patient's family have suffered in a similar manner and have died of disease of the uterus. This symptom, therefore, deserves especial attention ; we must not look upon it as a freak of the constitution, and limit ourselves, as is very frequently done, to the dangerous advice of *letting nature work it out*. Even though evil consequences should not follow, that is no reason why we should look on as idle spectators, and abandon the sufferers to hopeless pain. In these cases, the first point is to ascertain by touch — in the catamenial interval, be it understood — the state of the uterus. It rarely happens, that we do not find sub-inflammatory engorgement of the neck and, more frequently, of the body of the uterus. When the evil has reached this stage, we must first of all attempt to dissipate the engorgement by means which will be hereafter stated.

If, on the contrary, the uterus is found healthy, the cure, though more difficult, is nevertheless not beyond the resources of art. It can at least alleviate pain, and that is a great deal ; and, when this point is attained, the influence of a very powerful stimulus will be lessened. The constitution of the individual is to be carefully studied, not with any culpable design, but to acquire fuller knowledge of the treatment best suited to modify it.

In this latter case, the pain is commonly of a purely nervous character ; the patient complains of nausea, and has spasms of the vagina and strong sexual desire ;

yet coition, far from being pleasurable, excites and irritates. If an injection be thrown into the vagina, it is immediately expelled. The pulse is small, hard, vibrating; there is subsultus tendinum; and the whole frame quivers at the slightest emotion.

Two or three days previous to the recurrence of the catamenia, we must endeavor to tranquillize the nervous excitement, by the use of opiates, and especially by laudanum administered in enemata. This treatment, however, would not suffice to give a new impulse to, or at least to modify, a constitutional peculiarity; we must continue to act during the intervals from one menstruation to another.

Cold bathing, though frequently beneficial, is at times injurious to patients of a purely nervous character; it is, therefore, necessary to study out the idiosyncrasy of each individual, and learn all the antecedents, if there be any, connected with her disorder. Hot enemata and narcotics generally afford great relief. To those of a lymphatic temperament, with flabby flesh, we should prescribe bitter tonics, cold bathing, a generous diet, occasional narcotics, and even, if needed, a very small revulsive bleeding during the menstrual flow.

For plethoric women, whose flow is generally scanty, we prefer long continued hot bathing; to this should be joined a vegetable diet, reduced to three fourths, and, by degrees, even to two thirds of the usual quantity of food taken; very moderate exercise; emollient drinks in copiousness; the exclusion of coffee and liqueurs; and finally, in furtherance of the same object, a revulsive bleeding from the arm, of four

ounces, twenty-four or forty-eight hours after the flow has ceased, to be repeated in a fortnight, if necessary.

When once the catamenia appear, no matter under what circumstances, we have nothing to do but to encourage their flow.¹

¹ Prof. Masnier, of Strasburg, has spoken highly of the employment of the *liquid acetate of ammonia* in these cases of difficult menstruation, preceded or accompanied by uterine spasm. J. Cloquet has communicated a fact wholly conclusive in favor of this medicine. (*Archives générales de Médecine*, T. xii. p. 651.) I have myself twice administered it with success. In the first case, the patient had been suffering for two hours from the severest pains; forty drops in a wine-glass-ful of sweetened water, at a dose, calmed them in twenty minutes; and the catamenia, whose presence had been manifested by a few drops of blood only, now flowed freely and quietly. In the second case, I administered the first dose as soon as the pains commenced; at the expiration of an hour, though somewhat diminished, they were still quite severe, but yielded to a second dose of thirty drops only. Both of these patients had a slight degree of engorgement of the neck of the uterus still remaining, which, two months previously, was complicated in one of them with superficial ulceration of the posterior lip of the os tincæ.

Doctor Patin reported, in the *Mémoires de la société d'Agriculture, Sciences et Arts du département de l'Aube*, No. xxxvi., 1828, many cases, from which he deduced the following conclusions;

1 — The *liquid acetate of ammonia*, hitherto considered as a stimulant, is really sedative;

2 — The dose is from forty to seventy drops, which may be repeated four times in the twenty-four hours. At a smaller dose, it does not appear to have any direct appreciable effect. The stomach is not at all affected by it. A slight giddiness, a sort of temporary intoxication, follows its administration.

3 — It might be administered in painful menstruation — though it should be used with caution in this case, as it lessens the quantity of the discharge — in excessive menstruation, and uterine hemorrhage; finally, he recommends it in all cases attended by super-excitement of the genital system of woman.

I have had but one occasion of testing the efficacy of this medicine in painful menstruation. In this case, the catamenia flowed quite freely,

4. *Suspension of the catamenia.* — The catamenia, after flowing for some hours, may suddenly stop, though usually lasting still longer. If the uterus is healthy, we must seek to recall them within the twenty-four or forty-eight hours following their disappearance.¹ Not so if the uterus is diseased. On attempting to provoke their return in this condition of the organ, we have, Lisfranc says, nineteen times out of twenty merely aggravated the pains. We therefore make it a rule of conduct, in such cases, to leave nature entirely to herself; except that we are particular to bleed revulsively from the arm on the next day, and to repeat it in a fortnight, prescribing in the mean time, according to temperament, emollient or tonic drinks.

At other times, the disease of the uterus does not give a sudden check to the catamenia, but merely causes them to flow too scantily. Are we to promote

but were accompanied by the most excruciating spasms. The first time that I was called to see the patient, I administered laudanum by the mouth and by the rectum, and also prussic acid; neither produced more than a temporary relief. On the next return, I found the patient confined to her bed, so severe were the spasms. Fifty drops of the *liquid acetate of ammonia* were administered, and the pain was almost instantly relieved; it became quite tolerable on a repetition of the dose, and, the next day, there was no complaint except of an occasional darting pain through the pelvis. The catamenia now continued to flow freely and without pain; whereas, in the preceding month, the pain not only lasted during the whole time, but even persisted after they had stopped. Tra.

¹ We should employ every means adapted to accelerate the circulation and promote perspiration, such as lying in bed, warm and slightly sudorific drinks, at the same time that we endeavor to congest the pelvis by cataplasms to the feet and legs, hot enemata, &c. If the patient be nervous, and the suppression caused by strong mental emotions, warm bathing and sedatives will promote the restoration of the catamenial flow.

their flow? In many cases, Lisfranc says, we have attempted it successfully; in others, we have increased the congestion. There are as many facts in favor of, as against this course; and we have, as yet, no settled opinion relative to its correctness. If, however, the catamenia are completely suppressed, there are good reasons why we should not endeavor to recall them. On the one hand, the means employed will very probably be useless, to say the least; and, on the other, they may be injurious by increasing the congestion.

5. *Variation in the quantity of the catamenia.*— Finally, the flow of the catamenia may be excessive. We have stated previously, that this discharge is generally very limited in quantity in fat women, whilst with lean women it is usually much greater. Some of the latter might be tracked, during the first two days of their courses, by the blood which drops, despite the protection of thick folds of cloth; it pours forth from the vagina in a full stream. They are forced to keep in bed; and this enormous loss of blood frequently leaves them exceedingly weak.

Whilst the patient yet retains her strength, frequent bathing, moderate exercise, a vegetable and limited diet, will assist in moderating these excessive evacuations. If, however, she is feeble and nervous, the diet must be generous, and narcotics administered. In both cases, we must not forget the small revulsive bleeding from the arm a few days after the catamenia, repeated, if necessary, in the interval between it and the succeeding return.

6. *Cessation of menstruation, or critical age.*— The epoch at which the menses cease is no less variable

than that at which they make their appearance, with which it is generally related as far as this, that they cease early when they have begun early, and *vice versâ*. Their mean duration appears to be about thirty years, ceasing between the ages of thirty and forty in southern climes, between forty and fifty in temperate regions, and a few years later in more northern countries.

We say, then, that the mean term of cessation of the menses, in temperate climates, is between forty and fifty years of age. These two numbers, however, do not express the two extremes. Lisfranc has many times seen the catamenia cease at the age of thirty-five; he mentions an instance of a woman forty-five years of age, who had had no sanguineous discharge for fourteen years. In opposition to this premature cessation, he relates the history of three women who had been under his care, and who still menstruate, one at fifty-four, another at fifty-six, and the third at sixty-four years of age; all three are of a common temperament and enjoy excellent health. Haller mentions an instance in which the individual was menstruating at eighty years of age. Bernstein cites the case of a woman, who began to menstruate in her twentieth year, was brought to bed at sixty, of her seventh and last child, and who continued to menstruate to her ninety-ninth year, five years preceding her death.

The cessation of the menstrual evacuation does not take place suddenly, unless occasioned by fear, mental agitation, or some organic disease. In many cases, it is announced, months or years previously, by derangement of the function, the discharge being sometimes

abundant, and sometimes scanty, or else appearing at irregular intervals. The structure of the uterus becomes so modified by degrees, that it ceases to give exit to the catamenia; but the monthly determination to the organ still continues, for some time, to be renewed, and is a very active cause of its congestion. Do not however believe, Lisfranc says, what has been stated for a long time as a fact, that affections of the uterus are more frequent at this epoch than at any other. The great physiological principle, that the more an organ is used, the greater is its predisposition to disease, is as applicable here as elsewhere. Now the use of the sexual organs is at its maximum between the ages of twenty and twenty-five; and, between these two ages, diseases of them are the most frequent. Among the large number of cases of uterine disease in this hospital, (*La Pitié*,) there are not three instances to be found, in which the subjects have attained the age of forty.¹

In some cases, nevertheless, this so called critical age gives rise to certain troublesome symptoms, symptoms which depend on congestion of the uterus.

At this age, many women experience the venereal

¹ Constant Saneerotte has proved, by statistical investigations upon a large scale, that the mortality among women is greater between thirty and forty, than between forty and fifty years of age.

Maret, in his statistics of the population of the *Pays du Vaud*, has not found the age from forty to fifty more critical to women than that from ten to twenty years.

Benoiston du Chateauneuf has demonstrated, by very remarkable tables, that from 43° to 60° of latitude, the mortality from thirty to seventy years of age is greater among men than women.

Lachaise, in his *Medical Topography of Paris*, exhibits similar results.

orgasm, for the first time, in a violent degree. In nineteen out of twenty of these cases, the cause is irritation of the uterus; in the same way as the more remote irritation of the bladder causes frequent erections with man. From this source proceed, also, pains, erratic flushes of heat, nervous affections, headache, palpitations, leucorrhœa, and frequently hemorrhage. These affections are, moreover, particularly frequent in cities. Women in the country, being engaged in laborious occupations, waste by exercise those materials for which an outlet no longer exists in menstruation.

If the prodromata of cessation of the catamenia coincide with the age at which this change in the constitution may be presumed likely to occur, particular attention should be paid to any uterine symptoms which may appear, in order to oppose them immediately, according to the principles already established. No attempt, therefore, is to be made to increase a scanty flow, by inviting the blood to the uterus—a sure means of causing its congestion—but, one or two days after its cessation, the deficiency may be supplied by a small revulsive bleeding from the arm. The pains are to be quieted by baths, emollient injections, and small narcotized enemata. If the sexual impulse be very strong, we must remember that this orgasm may afterwards react upon and increase the irritation, of which it was at first the effect. Complete continence, therefore, errs as much in one extreme as the excessive abuse of sexual intercourse does in the other; moderate indulgence will be beneficial. Finally, if the flow should assume an hemorrhagic character, we should have recourse to the measures which will be hereafter indicated.

By observing the precautions just particularized, by attentively watching the changes taking place in the constitution—to be ready to modify them if necessary—this period of life will cease to be formidable; but if—as has already been too long the case—the pains, flushes of heat, nervous affections, palpitation, headache, leucorrhœa, hemorrhage, are all attributed to the period of return, as a kind of physiological consequence with which art must not interfere; it may, undoubtedly, well deserve the name of *critical*. On the general principles of pathology, suppression of an evacuation is usually regarded as a formidable accident. Cessation of the catamenia is suppression of an evacuation, and of one, moreover, which has grown old in the system; and yet the uterus is left to be irritated, tortured, if the expression is allowable, by the monthly congestion which it undergoes. With so many causes of mischief in operation, how can its organization escape disease? In cities, where no substitute for this functional evacuation exists, the cessation of the catamenia is generally attended by much general and local disturbance; and nature almost always requires aid to conduct her safely through the constitutional change.

CHAPTER II.

UTERINE HEMORRHAGE, OR MENORRHAGIA.

Our intention is to treat of this kind of hemorrhage, only so far as it is connected with disease of the uterus; we shall, consequently, say nothing of hemorrhages induced by pregnancy and child-birth, as these belong to the province of the accoucheur.

Is uterine hemorrhage, as many believe, an essential disease? For a long time, Lisfranc says, we have taught that menorrhagia is to the uterus what hemoptysis is to the lungs. As this latter symptom rarely exists without organic alteration of the pulmonary tissue, so uterine hemorrhage, of any duration, almost invariably indicates organic alteration of the uterus. We do not mean to say that this is always the case—since there are no principles in medicine without an exception—but merely that, among the immense number of cases which we have had occasion to examine, we have never met with an exception. It is very possible, and we do not deny it, that menorrhagia may exist without local alteration; we simply affirm that such an instance has never fallen within the scope of our observation.

Uterine hemorrhage may occur during the continuance of the menstrual function, or after its cessation.

The latter case is very common. Thus menorrhagia suddenly occurs five, ten, fifteen years after the critical period, and the individual imagines that her catamenia have returned. The error is not a singular one, since many writers have regarded, as a return of the menses, what, in our opinion, was probably nothing more than uterine hemorrhage.

Uterine hemorrhage must be distinguished from excessive menstruation. It does not possess the same periodical regularity that characterizes the menstrual evacuation. Thus menorrhagia will commence and last fifteen days, more or less, and will then disappear of its own accord, perhaps forever, perhaps to return again at an indefinite period. Sometimes, however, it is connected with the appearance of the menses, but, quite often, with characters so distinctive, that the two cannot be confounded. Sometimes, the catamenia show themselves first, and stop at the expiration of one or two days, and on the following day, a hemorrhage commences, lasts ten days more or less, and then ceases for twenty-four hours, to recommence again. Sometimes, the hemorrhage precedes the catamenia, stops shortly before their appearance, and leaves them to pursue, alone, their usual progress.

When the hemorrhage is copious, and has continued through many years, it becomes in a measure constitutional; its sudden suppression would be imprudent. We might reasonably expect to see serious symptoms develop themselves in other organs, especially in the lungs, whose sympathetic connection with the genital organs is so close. This is the point to which — after the cure of menorrhagia of long standing — the vigi-

lance of the practitioner must be directed. The instant any symptoms manifest themselves in these organs, we must have recourse to depletion, and form an issue on the internal part of the thigh, and, if they are very violent, even one on both thighs, as a substitute for the irritation previously existing in the pelvis, or, what is better still, as a means of renewing it.

A woman, twenty-eight years of age, and who had never borne a child, for twelve years had suffered from uterine hemorrhage, appearing regularly before the catamenia. The first time that Lisfranc attempted to suppress it, peritonitis supervened; the second time, notwithstanding preparatory venesection, pneumonitis occurred; on the third attempt, it was meningitis. All these diseases yielded, as if by a charm, to the application of leeches to the vulva.

In another case, the individual had suffered, for eight years, from a similar hemorrhage, depending upon engorgement of the uterus. A revulsive bleeding from the arm stopped the flow at any time; but headache, or some other affection immediately supervened, and was removed only by its reappearance.

In a third case, the patient, who was young, had tubercles in the lungs. The menorrhagia was very profuse. I was careful, says Lisfranc, not to suppress it entirely; I merely attempted to moderate it; and, whenever the pulmonary symptoms appeared to be increasing, I produced a determination to the uterus. By this simple, though rational treatment, her life had been prolonged for three years, during which the disease of the lungs seemed to have remained stationary. She went into the country; the physician, who attend-

ed her there, attributing her delicate health to the uterine hemorrhage, considered every thing else subordinate to its suppression, in which he was successful ; in a few months she died.

The causes of uterine hemorrhage are various. It is occasioned, sometimes, by the presence of a polypus ; at others, by a slight or serious inflammation of the body of the uterus, or of its cervix ; or by abrasions of this latter organ, so slight that they cannot be detected by the touch, and which are discoverable only by the assistance of the speculum ; sometimes, it is an effect of vaginitis, or indeed of any other cause of irritation in the pelvis, which may determine the blood towards its viscera. We can suppress uterine hemorrhage immediately, by direct means ; but, permanently to prevent its return, we must discover and destroy the cause on which it is dependent.

It is now evident that there are three distinctions to be made in menorrhagia, which necessitate modifications in its treatment — either the uterine disease is curable, and then the hemorrhage can be suppressed without danger ; or the hemorrhage is connected with a serious affection of some other organ, which its suppression would inevitably aggravate ; or else it depends on an uterine disease in itself incurable. We will now examine it successively, in these three points of view.

1 — It has been shown that the sudden suppression of menorrhagia, even when disease exists in none of the viscera, is capable of inducing very serious symptoms. We must therefore, in the first place, prepare the constitution for the change, even though the hemorrhage be of recent date ; thus we begin by taking

from the arm four or, at most, eight ounces of blood. Bosquillon never omitted this precaution, even when the blanched lips and feeble pulse of the patient showed her to be nearly bloodless. Not unfrequently, however, the strength increases rather than diminishes under its influence. The patient should at the same time be kept quiet, and put upon a diet appropriate to her condition. Her drink should be a decoction of the great comfrey, sweetened with the sirup of the same plant.

On the next day, if the patient has a moderate degree of strength, repeat the bleeding; let it be revulsive in every case, and, very rarely depletive, unless evident signs of plethora exist. After these two bleedings, we may employ local applications, such as refrigerants or astringents; the pelvis is to be kept elevated; and, as a final resort, if the flooding be profuse, we must have recourse to plugging, one of the surest means of arresting hemorrhage. When we have succeeded in this object, our attention must be directed to the disease from which the hemorrhage originated; the cure of the former will, most assuredly, prevent the return of the latter.

The same principles regulate the treatment when the menorrhagia is of long standing and has acquired, as it were, a prescriptive tenure in the constitution. But, in this case, the preparatory precautions must commence longer beforehand, in order to enable the system, by degrees, to dispense with this kind of issue. Entire months must be employed in modifying the constitution of the patient; all the resources of hygiene must be put in requisition, — exercise; diet, sometimes

tonic and abundant, sometimes vegetable and restricted, according to the state of the patient ; drinks, sometimes emollient, sometimes astringent ; and, in particular, from time to time small revulsive bleedings. By these general measures, the constitution insensibly changes ; at first, the hemorrhage gradually diminishes in quantity ; soon, in frequency ; and, finally, it may be entirely suppressed without danger.

2 — If menorrhagia be complicated by a visceral affection, pulmonary disease for example, as in one of the cases recently mentioned, the manifest course of the physician is, to moderate the copiousness of the flow by the general means indicated, but scrupulously to abstain from those local means which would entirely suppress it. In such cases, when managed by a skilful physician, this hemorrhage is the most efficient means of prolonging the patient's life.

3 — This division includes those cases in which the hemorrhage proceeds from an incurable disease of the uterus. Much evil is often done by arresting it ; the symptoms of the disease are aggravated almost immediately. In these cases the hemorrhage, provided it be not in excess, is most frequently a blessing. It is a natural means of diminishing the engorgement of the diseased organ and of the surrounding parts, and the severe pains, which existed prior to its appearance, are very frequently almost removed by it. If spontaneously or imprudently suppressed, the symptoms are aggravated ; the disorganization, which has hitherto proceeded slowly, now advances with fearful rapidity ; the pains return with increased severity, and again disappear when the hemorrhage is renewed. In such

cases as these, menorrhagia must be treated with discretion.

More rarely, the hemorrhage adds to the pains and determines all the symptoms which we have just stated to result from its suppression. In this case, it indicates fresh engorgement, which must be combated by general measures and, principally, by revulsive bleeding.

Hitherto we have spoken only of hemorrhages which are profuse, but which do not immediately endanger the patient's life. If the flooding, however, should assume such a character, every other consideration must yield to the necessity of averting the instant danger. Besides the revulsive bleeding, we should use all those local means whose action is most speedy, such as cold and astringent injections, or even have recourse without delay to plugging. Without meaning to enter into any details here as to the mode of doing it, we will simply say that the tampon need not be introduced further than an inch into the vagina, if the passage be unobstructed; but, if it be filled by morbid excrescences, a simple compress, either supported by the hand or a suitable bandage, should be placed flatwise over the vulva. The design of these precautions is, that the materials used for plugging may not irritate either the diseased tissues, or the neck of the uterus, the sensibility of which, when in a morbid state, is much increased. We also know the influence of foreign bodies, in the production of hemorrhage, when in contact with the uterus. The clot, which speedily forms between the compress and the neck of the uterus, will be a less irritating plug. At the expiration of an hour or two, the compress and coagulum may be removed,

when the case requires the hemorrhage to be moderated considerably, but not suddenly and entirely suppressed.

Having now presented, in their full extent, the ideas of Lisfranc upon the phenomena of menstruation and menorrhagia, we shall again speak, with some detail, of chlorosis, and retention of the catamenia by physical obstacles. These two latter states are of such frequent occurrence as to deserve more than a passing notice.

Chlorosis. — By the term chlorosis, we designate a series of symptoms, of which the principal are paleness and tumidity of the face, discoloration and dryness of the skin, accompanied by great debility and derangement of the digestive organs, and ordinarily connected with a disordered state of the uterus or its functions.

Among the prominent *predisposing causes* of chlorosis we may enumerate a feeble, lymphatic constitution; a cold and humid residence; coarse, innutritious food; the abuse of diluents, of warm bathing; and all debilitating causes, such as excessive sleep or prolonged watching, too sedentary a mode of life, &c. These causes operate with particular effect at the age of puberty, before menstruation is established, or when it is irregular and scanty. Of the twenty-six cases of chlorosis reported in the *Mémoire* of Bland de Beaucaire (*Revue Méd.* 1832, T. I, p. 387), twenty-four were from the age of eleven to thirty-two; of this number seven were from eleven to seventeen years of age and had not begun to menstruate; and eight were of the age of seventeen. Fifteen, it is true, continued to have their courses, but the blood was serous and almost colorless.

The most frequent *exciting causes* are, in general, depressing passions and affections and — when the disease occurs in virgin girls of an amorous temperament, or in women who have had sexual intercourse — privation of the physical gratification of love. Finally, chlorosis may be occasioned by excessive menstruation, as well as by its accidental and long continued suppression.

The symptoms of chlorosis do not always appear in the same regular order. Most usually, however, the disease commences with the local symptoms of engorgement of the uterus. The catamenia are either suppressed, or else do not appear at the age of puberty, or else they are irregular and painful. In those not very uncommon cases in which menstruation continues, it is totally deranged; the intervals are irregular, being either too long or too short; the blood is pale, serous, and in diminished quantity. The stomach soon becomes affected, and its functions are entirely deranged; the appetite is more or less impaired; the patient longs for acid, acrid aliments, or substances wholly indigestible, such as chalk, charcoal, &c. This depraved state of the digestion is soon followed by all the signs of debility, in a greater or less degree; paleness, tinged sometimes with yellow and sometimes with green; tumidity of the face; lips colorless; eyelids livid and tumid after sleep; conjunctiva pale, expression of the eye sad; lassitude. The least exertion is a toil, and repose alone is desirable; the patient is sad and dejected, seeks to be alone, and often sheds involuntary tears; respiration is embarrassed, especially in going up stairs; in the evening, the lower extremi-

ties swell ; palpitation is continuous or intermittent, simulating disease of the heart ; the pulsations in the cervical arteries are stronger and produce different sounds — sometimes it is a diffused bellows-sound, more or less distinct, or a kind of cooing, of musical vibration (*Bouillaud*) ; sometimes it is a peculiar sound which has been termed *devil's noise* (*bruit du diable*), from its similarity to the buzzing produced by the child's plaything called the *devil*. These different sounds are audible in the carotids, more rarely in the subclavians ; they are usually louder on one side than on the other, and experience no intermission. They can all be distinguished perfectly, by placing a stethoscope above the internal extremity of the clavicle, over the point corresponding to the arteries. On pressing the instrument upon these vessels, not however forcibly enough to interrupt the circulation, a sort of murmur, which is unpleasant to the ear, is audible. The sound diminishes or even ceases to be audible by removing the instrument a short distance from the artery in which it is heard. The pulsations of the heart are diffused ; but the sounds, though distinct, do not at all resemble the resonance heard in the cervical arteries (*Bouillaud*).

At each menstrual period, the symptoms are aggravated ; and, if the course of the disease be not checked, habitual headache in the occiput supervenes ; the œdema of the extremities progresses ; the abdomen becomes tense and painful ; some organic affection now manifests itself, and not unfrequently death ensues, with all the symptoms of hectic fever.

The duration of chlorosis varies from one month to

several years ; of twenty-eight patients treated by Blaud de Beaucaire, one third were cured in about twenty days, and one case lasted till the thirty-second day.

This disease may terminate favorably, solely from the changes brought about in the constitution by age, or from appropriate treatment, or else from removal of the causes by whose agency it was developed. Thus a change of climate or journeying have in some cases been sufficient to restore health. Chlorosis may terminate in death, either from a continuance of its causes, or from treatment inappropriate or too long deferred, until organic disease develops itself and becomes incurable.

Chlorosis, especially when it occurs at puberty, is, in its simple and recent state, generally attended with little danger. Its cure is quite easy, provided the constitution be not very much debilitated. Not so, however, when it is complicated by any grave organic alteration ; it is then very serious and often hopeless. Its danger, pretty commonly, is dependent upon the organic affection by which it is accompanied. Chlorosis has been assigned as a cause of sterility ; and, in some cases of pregnancy, the issue is stated to have been feeble and sickly. May we not, however, ascribe the difficulty of conception to the engorgement of the uterus ?

The *proximate cause* of chlorosis has excited much discussion. It has been variously located, according to the particular parts of the system in which its attendant phenomena have most prominently shown themselves.

As chlorosis is most commonly the consequence of amenorrhœa, this latter is generally considered as its proximate cause. Some writers, however, having seen a well marked chlorotic state in cases not accompanied by complete suppression of the catamenia, have ascribed it to derangement of the digestive organs, the symptoms of which first attracted their attention. Others, again, have regarded it solely as indicating an anemic state of the blood, which has become more serous and consequently less stimulating. Finally, Cabanis thought that a nearer approximation to the truth might be made by avoiding each extreme and by uniting, in some measure, these divers opinions. He therefore assigns, as the proximate cause, a languid, inert condition of the sexual system and a defective or irregular action of its organs upon those of nutrition and sanguification. This theory, consequently, combines all the previous opinions, to explain the same phenomena.

In the majority of cases, Lisfranc regards the symptoms of chlorosis merely as the reaction of engorgement of the uterus upon the different organic functions. Though this opinion cannot be exclusively admitted, it is impossible to deny its correctness in many cases, when we reflect that a well marked engorgement of the uterus ultimately reduces women, previously in good health, to a condition approaching that of chlorosis. This opinion is, besides, supported by the case, mentioned by Bland de Beaucaire, of a young woman of twenty-three years of age, in whom chlorosis commenced on the day following the first night of her marriage, continued during pregnancy, and was not finally

cured until many months after her confinement. Nevertheless, a predisposition, a constitutional peculiarity, on the part of the patient is requisite to a truly chlorotic condition. At first sight, it would seem as though pathological anatomy might remove any uncertainty existing as to the seat of chlorosis. Unfortunately, however, in the necropsies made of chlorotic subjects, no account has been taken of the innumerable modifications in the form, volume, weight, color, and density of the uterus, the condition of its appendages, &c. Writers have carefully noted the morbid appearances peculiar to the coincident organic diseases, but not one which can be ascribed to chlorosis solely. The bloodless state of the dead body (*Lieutaud*) and the softening of the muscular tissue throw no light upon the determining cause of this anemia.

Treatment. — The indications of treatment, generally, are to be deduced from the probable cause of the disease. Lisfranc thinks it of the utmost importance to ascertain, in the first place, the condition of the uterus, by touching by the vagina or, if the hymen-membrane were perfect, by the rectum. If engorgement exist, it must be attacked by all the means which will be hereafter pointed out in treating of this affection.

There is no doubt that, in many instances, an engorged state of the uterus is the determining cause of the chlorotic symptoms. But in this case the character of the disease is altogether peculiar; its nature is essentially chronic. The mode of treatment recommended by Lisfranc would be excessively slow in its effects, to say the least, whereas the physician has at his command a course of treatment, which is at

once more prompt and, especially, more certain in its results.

The object in view is to increase the vitality of the patient, by giving additional energy to the function of nutrition and, consequently, to that of sanguification. The means best calculated to effect this result are those from which the greatest benefit is obtained; and this is so true, that a change of climate is, frequently, sufficient of itself to arrest the progress of an incipient chlorotic affection, and even to cure it completely, with more or less rapidity.

The first principle of treatment is, to withdraw the patient from those general influences which may be regarded as predisposing and exciting causes of the disease. The therapeutic means will modify the system the more speedily, when not counteracted by their constant operation.

Whatever may be the aversion to exercise, we must insist upon its use, in a degree proportioned to the general strength. Walking or, which is preferable, riding on horseback in the open country is especially appropriate. A dry, well ventilated dwelling, and a dry, elastic atmosphere are very advantageous when the social position of the patient enables us to place her in these favorable conditions. Habit, however, soon diminishes the influence of the atmosphere over the system; hence the necessity of changing the locality from time to time, in order to keep up a continued stimulation. Travelling unites the advantages of exercise and of change of place, and its utility is very generally conceded. In this way, the use of mineral waters, drunk at the springs, is attended by advantages,

independent of the benefits arising from the salts which they hold in solution.

The use of exercise, however, requires some consideration. The principal object of its prescription is to modify, and especially to strengthen, the constitution. But, independently of its action upon the system generally, it exerts a special influence over the uterine system, from its mode of union with the adjacent organs. The motion, communicated to it by exercise, acts as a stimulant; this local excitement cannot be equally beneficial in every case. We have stated, as a fact of frequent observation, that chlorotic symptoms are apparently the result of engorgement of the uterus. If the engorgement is trifling, exercise is a powerful agent in its resolution; but, if it is excessive, if the uterus be doubled, tripled in size, all local excitement, unless in a limited degree, would contribute, if not to its increase, at least to its persistence. Walking, therefore, very moderately and never to fatigue is the exercise which should be recommended in such cases.

Some writers have extolled marriage as the best remedy for chlorosis. As a local stimulant, for such is its remedial character, it is subject to the preceding reflections. If the disease be of recent standing, if the privation of the pleasures of love have been its probable cause, if, in a word, the engorgement of the uterus is little or none, it is evident that coition may be beneficial by stimulating the genital organs; but it may be followed by injurious effects, under the opposite conditions, and when the patient is much debilitated.

The diet should consist of very nutritious and slightly stimulating food, of easy digestion. In cases

accompanied by complete loss of appetite, we should not persist in loading the stomach with food which it instinctively rejects, but wait until its lost energy has been restored by internal medication, to which immediate resort should be had.

The medicines, which have hitherto been the most certain in their results and which seem to be called for by the union of symptoms in this disease, are tonics, such as bitters and the preparations of iron, alone or united with cinchona, saffron, canella, &c. Of all the preparations of iron, the most frequently used and the most successful are the sub-carbonate and the black oxyde of iron, in doses varying from six or eight grains to a half or whole drachm, once, twice, or thrice daily. Blaud de Beaucaire has proposed the following formula, as attaining the desired object better than any other; take sulphate of iron and sub-carbonate of potass, of each half an ounce; reduce them, separately, to very fine powder, and mix gradually; rub the mass down carefully with a sufficient quantity of mucilage of gum tragacanth and divide into forty-eight pills. They are to be taken in the following manner; the first, second, and third days, one pill in the morning, fasting, and one at evening; the fourth, fifth, and sixth days, one more at noon; the seventh, eighth, and ninth, two pills, morning, and evening; the tenth, eleventh, and twelfth, two more at noon; the thirteenth, fourteenth, and fifteenth, three pills, morning, and evening; on the sixteenth and following days, four, morning, noon, and evening.

“The medicine,” says Blaud de Beaucaire, “is scarcely introduced into the system, before a marked

improvement appears — however long and severe the disease may have been — commencing sometimes on the second, or even the first day of treatment after years of suffering, and, what is remarkable, without the coöperation of any other medicine. The improvement ordinarily advances in a rapid manner, uninterrupted by any unfavorable symptoms, even in those affected by cardialgia, diarrhœa, &c., symptoms which would seem to contra-indicate tonic treatment. At first, a faint rose tint colors the skin, principally, of the face, and the eyes recover their lost lustre. At the same time or shortly afterwards, the symptoms of reaction upon the organic nervous system, the obstinate gastrodynia, sleeplessness, buzzing in the ears, and headache, diminish visibly and soon entirely disappear. The respiration is freer, the pulse less frequent, palpitations less violent and more rare, the œdema vanishes, the strength is restored, the appetite returns, despondency brightens into hope, and a sensation of general well-being succeeds to that corroding uneasiness which imbibittered life; and soon all the organic functions resume their normal condition.”

It is important, however, not to relinquish the treatment at the moment of returning health. Blaud de Beaucaire recommends that the medicine be continued just as many days longer as were needed to cure the disease, gradually returning to the commencing dose.

The results obtained by Blaud de Beaucaire in a large number of cases have been confirmed by many other physicians, among them Delens, who substituted the bi-carbonate of potass or soda for the sub-carbonate of potass, without impairing the efficacy of the remedy.

Bleeding, which is recommended by some writers, is rejected by the greater number as injurious. When engorgement of the uterus exists, Lisfranc treats it in his usual manner ; and also occasionally prescribes, at the periods already particularized, a small revulsive bleeding. Venesection, prescribed in very small quantity and with great discretion, has sometimes been found useful during the course of treatment ; principally in those cases, in which chlorosis is owing to uterine engorgement complicated with profuse menorrhagia or leucorrhœa. As the treatment diminishes more or less rapidly the quantity of these discharges, a state of fulness, plethora in the system is induced ; a very small bleeding removes it almost instantly, and allows the previous treatment to be continued.

Constipation is to be remedied by enemata. Dr. Hamilton, being struck by the frequency of this symptom in chlorosis, was led to regard it as the principal cause of the disease, and for this reason he gave the preference to purgatives as the most successful method of treatment. He particularly recommends pills of aloes and gamboge, and the powder and tincture of jalap. When the alimentary canal has been properly evacuated, tonics, he says, may contribute to recovery ; but, if they impair the appetite or occasion any uneasiness, their efficacy is doubtful. In this case, the treatment should consist solely of food easily digested and frequent exercise on foot. Finally, emetics have been recommended with the view of evacuating the primæ viæ, or of giving a healthy shock to the system.

Amenorrhœa by non-excretion or, rather, *physical obstructions to the flow of the catamenia*. — The exhalation

tion of the menstrual blood is not sufficient to the completion of menstruation. It is requisite, besides, that the secreted fluid should be discharged outwardly, through the utero-vulvar canal. Every obstruction to this latter process gives rise to morbid phenomena, of which we shall proceed to state the principal characteristics.

Non-excretion of the menstrual blood has only one point of resemblance to amenorrhœa proper; and that is the non-appearance, externally, of the catamenia; in every other respect, these two diseases are entirely dissimilar. Amenorrhœa deranges the system generally and, in the majority of cases, violently; the other, on the contrary, is followed at first by local symptoms only, of quite a peculiar character. Their reaction upon the system, if any ensues, is also totally different from that of amenorrhœa.

The sole cause of menstrual non-excretion is obliteration of the vulvo-uterine canal. The obstruction may be complete or only partial, congenital or accidental; in this latter case, it has been occasioned by wounds or burns of the genital organs, or injuries resulting from the use of instruments in parturition, &c.

The obstacle, which opposes the exit of the blood, is most commonly near the external genital parts; it may, however, be seated higher up in the vagina. Its extent varies. Finally, it sometimes consists of an obliteration of the external orifice of the uterus.

When the occlusion is partial only, the catamenial blood may still succeed in making its way outwardly, though the slowness and difficulty, with which it flows, occasion tension, tenderness and pain in the hy-

pogastrium, a sensation of weight about the seat, and distension of the external organs of generation. By degrees the blood makes its escape ; and the symptoms ordinarily vanish of themselves. But, when the obliteration is perfect, the retention is complete. The secretion of each month accumulates and distends the parts immediately above the obstacle. Thus, when the obstacle is near the external genital parts, the distension commences at the lower portion of the vagina, and gradually extends even to the uterus, which is, itself, finally distended. On the other hand, if the retention be occasioned by occlusion of the uterine orifice itself, it is apparent that the walls of the uterus alone will be distended. Wherever the obstacle may be seated, the blood first fills the pelvis, and then — both from successive accumulation and want of space — it rises, contained within the uterus, into the abdominal cavity, whose anterior wall it throws forward, and a tumor of variable dimensions is formed. The distension of the hypogastrium resembles, in its progress, that of pregnancy. It is however to be observed, that the hypogastric region does not swell gradually, but by fits and starts corresponding to the successive periods of the menses, which are, moreover, announced by all the symptoms usually attendant upon the menstrual effort.

It is easy to conceive how enormous this accumulation of blood — to which each returning month contributes — may become. At the same time that it distends upwardly, it pushes downwards the floor of the cavity wherein it is contained. If the obstruction be an imperforate hymen, this membrane protrudes

between the vulva in an ovoid form and is easily recognized; if it be in the neck of the uterus, this organ descends still lower into the vagina.

The forcible distension of the uterus causes pain in the groins, colic, uterine spasms, and tenderness more or less extreme in the hypogastrium; and, at the same time, the blood gradually compresses, by its accumulated quantity, the pelvic organs — rectum, bladder, sacral plexuses, and sciatic nerves — from which arises difficulty in expelling the urine and fæces. The same cause also explains the numbness and cramps of the lower extremities, and the sensation of weight upon the perinæum and rectum, especially in an upright position.

Imperforation of the vagina, however, does not uniformly induce the effects just detailed. Under some circumstances, puberty arrives without the appearance either of these phenomena or of the menstrual flow. This difference depends upon the condition of the internal organs of generation. The phenomena, which we have just described presuppose above the obstacle an organ to secrete the menstrual fluid; whilst that, among women affected by congenital imperforation of the vagina, there are those who either have no uterus, or, if any, it is small, defective in structure, and unapt for menstruation. The young girl who passes, without any bad symptoms, the age at which the menstrual flow is established, may reasonably be presumed to be in this latter condition. A number of cases of the kind are to be found on record.

The uterus may, likewise, cease to supply its menstrual secretion, even in the case of accidental obliteration.

tion of the vulvo-uterine canal, occasioning a new series of symptoms, as may be seen from the following cases.

Last year, we saw in ward St. Augustin a woman, thirty-two years of age, with imperforation of the vagina at about three inches from its orifice. It had only existed two years; and was occasioned by the use of instruments during labor. She remained in the hospital two months, and we had an opportunity of observing her at two menstrual periods. On both occasions a scanty discharge of blood took place from the vulva, accompanied by all the symptoms of metropéritonitis; these were removed in the course of six or eight days by revulsive bleedings, the application of leeches above the pubis, baths, cataplasms, enemata, and severe diet. In the intervals, the health was satisfactorily reëstablished. On examination by speculum, during the catamenia, the blood was seen to ooze from the entire surface of the sac formed by the vagina; not the smallest orifice could be discovered either by sight or by a probe. Moreover, when the period had passed, no signs existed indicating an accumulation within the cavity of the uterus.

We will, finally, relate a case in which amputation of the cervix was followed by complete obliteration of its uterine orifice. The catamenia diminished in quantity as the cicatrix became older and finally ceased entirely, with corresponding deterioration of the general health. The most judicious means, however, failed to moderate the menstrual effort, which reappeared periodically, as usual. This monthly congestion of the pelvis singularly accelerated, even if it

were not the original cause of, a disease which supervened in the right iliac fossa.

CASE. — Madam ——— aged thirty years, had suffered greatly during her first menstruation. She was married at fifteen and a half years of age, and became pregnant almost immediately. Her pregnancy was favorable both in its progress and termination. Nevertheless, her confinement laid the foundation of disease in the uterus; it was manifested by pain in the neck of the organ, irregular menstruation, and leucorrhœa which was at times profuse; sexual intercourse was painful both during the act and afterwards. Some years passed on in this manner, without any aggravation of the symptoms; but all at once the pains became more severe, and were followed by acrid, white discharges, and by menorrhagia. The patient now consulted a practitioner who had devoted himself to the study of uterine disease. At the first examination, the neck was found to be large, swollen, and having a tumor, of the size of a pigeon's egg, imbedded in its superior portion. Amputation of the neck was considered indispensable; and the operation was performed some days afterwards in presence of Lisfranc and Avenel of Rouen. The operator, merely seizing the tumor by the hooks of Museux and without attempting to draw down the uterus, amputated the neck, at the superior extremity of the vagina, by means of curved scissors.

The operation was long and difficult; and the tumor was removed piecemeal. With the exception of hemorrhage, which required the tampon, no unfavorable symptoms followed. Cicatrization proceeded rapidly; and forty days after the operation the catamenia

reappeared. But from that time it was impossible to discover, by any means of exploration, the uterine orifice.

The patient, however, regained her flesh and color; and, for two years and a half, the catamenia occurred regularly, though in less quantity than before the operation. In the third year, they became remarkably scanty and were attended by severe pain. In Sept. of the fourth year, they were retarded and, shortly afterwards, the patient was attacked by severe peritonitis, with inflammatory engorgement in the right iliac fossa. Notwithstanding the severity of the symptoms, they yielded, in three weeks' time, to copious general and local bleeding, baths, and cataplasms. From this date the catamenia totally ceased, in spite of every means used to promote their reappearance. Nothing unfavorable occurred in Nov. and Dec.; the patient's health was tolerable. But in Jan. 1831, dull and deep-seated peritoneal pains supervened. On attentive examination, well-marked engorgement was discovered in the right iliac fossa. The digestion was so much impaired, that no other nutriment could be taken than chicken broth in small quantities. At each menstrual period, severe pains were felt in the abdomen; but no means could restore the catamenial flow. This state of things continued until April, when the symptoms assumed a much graver cast. The iliac engorgement became more painful, and the inflammation extended throughout the whole intestinal canal. Worn down by a slow, continued fever, and unable to digest, the patient soon fell into a well-marked state of marasmus; colliquative diarrhœa set in and soon wasted her little

remaining strength. She finally died near the early part of June, in a frightful state of emaciation.

Necropsy by Carron du Villards and Duperret. — “Having perfectly isolated the genito-urinary apparatus, the bladder was dissected from the vagina, which was carefully laid open in its whole length. We were very much astonished at finding it to terminate superiorly in a sac, the walls of which were solid and homogeneous in structure, and formed of the fibrous substance peculiar to cicatrices, which Delpsch designates by the term *inodular*. We were unable, on most minute search, to discover the uterine orifice; it was entirely obliterated. In the right iliac fossa was a tumor, the centre of which was filled with softened tuberculous matter. The lungs, as well as the other thoracic organs, were healthy; but the intestinal canal showed unequivocal traces of inflammation. The mucous membrane of the stomach was softened, and small conoid ulcers were visible here and there. The small intestines were likewise ulcerated in many places. At different points of the mesentery were chains of little ganglia in a state of engorgement and upon the point of suppuration.”

The diagnosis of these affections is generally quite easy, requiring merely careful examination of the genital passage. When retention of the menses is occasioned by imperforation of the hymen, a simple investigation is sufficient. The difficulty however is greater if the obstacle be seated higher up in the vagina and, especially, at the orifice of the uterus. Under these latter circumstances, amenorrhœa, taken in connection with developement of the uterus, has more

than once created suspicion of pregnancy. In this case, the stethoscope may be used with advantage; all uncertainty would be removed by the absence of the uterine *souffle* and of the double pulsations of the foetal heart.

The prognosis depends entirely on the nature of the obstacle to the menstrual flow. When the anormal arrangement can be easily remedied, it is favorable; it is, on the other hand, quite unfavorable in case of absence of the vagina, or even of its obliteration to any extent. The blood accumulated in the uterus finding no issue, death is the inevitable result unless, by an operation in itself very dangerous, we can succeed in opening a passage to the uterus. Death has occurred from rupture of the Fallopian tubes and consequent effusion of the blood into the abdominal cavity. In cases similar to those narrated on pages 206, 207, the prognosis is generally unfavorable; we cannot foresee the termination of symptoms which it is often impossible to prevent or to arrest. It is moreover evident that, independently of the dangers just mentioned, imperforation is an obstacle to the reproduction of the species, and in this respect merits especial attention.

The treatment consists in restoring, by an operation, the permeability of the genital passages. The patient is placed, in the different operations of which we are about to speak, as for the operation of lithotomy. We shall first examine the different kinds of incomplete obliteration, in which the canal, though open its entire length, is of insufficient capacity and requires enlargement.

Occlusion of the vulva is remedied — not, however,

until the presence of a vagina is ascertained — by dissecting apart the greater and lesser labia, if their separation cannot be effected otherwise, and taking precautions to prevent their reunion.

The vagina may be contracted, imperforate, or even totally deficient.

The contraction may be limited to a portion of the vagina, to its orifice, or affect its entire length. Wherever seated, the first object is to ascertain its extent; for this purpose, pass a probe through the opening, and endeavor to seesaw it in every direction. If the instrument can be moved in this manner, and more especially if it can be done with ease, it may be inferred that the obstacle is a simple transverse partition, a sort of diaphragm, the thickness of which we can estimate with a certain degree of accuracy; we can also determine whether the vagina is of normal dimensions beyond it. The second step of the operation consists in ascertaining that the partition is not formed from the recto or vesico-vaginal walls. If this should happen to be the case, an incision into it would in all probability penetrate into the rectum or bladder. A catheter is, therefore, passed into the bladder and its point turned towards the vagina; the bladder is carefully explored in this direction, whilst the operator satisfies himself whether the instrument strikes against his fore-finger resting upon the corresponding portion of the vaginal partition; if it does, it shows it to be a pouch formed from the bladder. Then, without withdrawing his finger, he immediately proceeds to examine the rectum with the fore-finger of his other hand. This examination has the double advantage of preventing a

serious operation — if the partial obliteration were formed by the recto or vesico-vaginal walls — and of showing the relative situation, nearly, of the opening of the diaphragmatic partition with the organs to be avoided ; and, consequently, of guiding the incisions so that they may be made with safety. Finally, if the probe, on being passed through the contracted portion, seesaws more easily in one direction than in another, we may infer that the walls of the vagina are not equally distant from the opening. Having taken these precautions, a straight, narrow, and probe-pointed knife is passed along the fore-finger, and through the opening, which is divided, in different points, to a proper depth and in a safe direction. The now enlarged aperture is filled with lint, which is changed frequently in the course of the day, and kept distended by it until the wound has entirely cicatrized.

The contraction may be presumed to affect the whole length of the vagina, when the extremity of the probe cannot be made to deviate in any direction. A partial contraction may be easily remedied ; but it is extremely difficult to destroy one which extends throughout the canal. An operation would be very tedious, and very uncertain in its results ; the rectum or bladder, as it has sometimes happened, might be opened. There is additional reason to suspect the vicinity of these organs, when the conformation is a congenital defect, and these are the more frequent cases. Finally, even after we have succeeded in enlarging the contracted portion by an operation, it is extremely difficult to preserve it in this condition, in consequence of the progressive contraction of the cicatrices, which continues

for a very long time. The method of dilatation is preferable to division, as there is no urgent necessity for haste. If its success is not always durable, still we can reëmploy it without danger, and by its skilful use the object proposed has been more than once attained.

Partial contraction does not exclude pregnancy. The cases, in which conception has taken place without introduction of the penis, are so numerous, as to put the fact beyond doubt. "In the *Mémoires de l'Académie des Sciences*, for the year 1771, we find," says Boyer, "a case of contraction of the vagina, which disappeared (during pregnancy) without the aid of art. The subject of it was married at the age of sixteen; her vagina was so contracted that a goose quill could barely enter; the obstruction was not formed by a membrane. At each menstrual period, a painful tension was felt in the uterine region, owing doubtless to the difficulty with which the blood traversed the vagina, which was thought by her medical attendant to be more contracted near the uterus than the vulva. Independently of her sufferings during the catamenial flow, she was subject to the continual, but unsuccessful efforts of a young and vigorous husband to force a passage. Finally, at the expiration of eleven years she became pregnant; though her husband had made no more progress than on the first day. Her medical attendant was convinced that she could not be delivered in a natural way. Nevertheless, about the fifth month, the vagina began and continued to dilate until it had acquired the ordinary dimensions, and she was finally safely delivered. The same collection, 1748, contains another case of a similar kind. The vagina

of a lady at Brest was so contracted that it would scarcely admit a writing quill. She became pregnant however; and was happily delivered, after three hours labor, of a large, stout child. In this case, dilatation did not take place until the pains were the most violent."

Occlusion of the vagina may be complete or incomplete. Incomplete and accidental occlusion is, according to Boyer, quite rare. He mentions one case, in which the entrance to the vagina was opened by a crucial incision that gave exit to three pints of blood. Incomplete and congenital occlusion is, on the contrary, quite frequent, and ordinarily is dependent on a peculiar arrangement of the hymen. This difficulty is easily remedied by division of the membrane, the knife being guided by a director, for greater certainty.

Independently of adhesions between the external organs of generation, complete occlusion of the vagina may be formed by a membrane of greater or less thickness, which is nothing more than an imperforate hymen. This occlusion may extend further up in the pelvis, even to the uterus; finally, the vagina may be entirely wanting.

If the hymen alone closes the orifice, it is found protuberant, softish, and bluish, from the accumulation of the catamenia. This obstacle may be removed by passing a straight knife through its centre and cutting, from before, backwards and laterally, and by removing with the scissors the small flaps. The opening is to be kept sufficiently dilated by lint, for reasons which have been stated in the *Surgical Anatomy*. Immediately after division of the membrane which retained

the blood, it flows outwardly ; usually, it is viscid and blackish ; sometimes, it is serous and seems as if it had undergone partial decomposition. The uterus and vagina, being unable from previous distension immediately to recover their normal size, are exposed to serious inflammation from the introduction of air and the exposure of an extensive surface to all the various causes of irritation. At the same time, therefore, that we use emollient lotions in abundance — to cleanse these organs and remove those parts of the blood, which, from their long continuance there, might have been converted into concrete membranes, and whose decomposition would be an additional cause of inflammation — it would be advisable to administer ergot in pretty large doses, with the view of exciting contraction and thus reducing the dimensions of the uterus. If the least fever, heat, or pain in the pelvis, supervene, the diet should be severely strict, and the treatment antiphlogistic in proportion to the violence and nature of the symptoms. Moreover, if indicated at a later period, the emollient injections should be exchanged for detersive or even antiseptic injections, according to the symptoms.

If occlusion of the vagina exist at a certain distance from its external orifice, the operation is of course more difficult to perform, and its results much more uncertain. In the first place, it is impossible to get a precise knowledge of the length, or, at least, of the anatomical disposition of the obliterated portion ; in the second place, the incisions are to be made between important organs, the rectum and the bladder.

The obliteration may, it is true, be formed merely

by a perpendicular partition of greater or less thickness, and the canal, above the obstacle, may have its usual dimensions. But, in this case, the accumulation of the menstrual blood soon depresses the partition nearer to the vulva and demonstrates the simplicity of the case. The operation, in this instance, will be similar to that for incomplete occlusion of the vagina.

In those cases which give no indication of such an anatomical conformation, the question assumes a serious character. But, whether the obliteration be confined to the superior portion of the vagina, or occupy its whole extent, or whether the vagina be entirely wanting, the same considerations are applicable to the mode of operation. We shall speak of the latter two cases only; merely remarking with respect to the first, that the gravity of the operation is diminished in consequence of the less thickness to be divided; and that the division, instead of being made externally, at the perinæum, is made within the vagina, in the sac formed by the obstruction.

We must not, however, undertake so hazardous an operation, without previously considering the patient's condition. If her life is endangered by the successive accumulation of the menses, and there is the slightest hope of opening a passage to the uterus between the rectum and bladder, experience justifies the operation, which has in some cases been successful. Independently of the danger of penetrating the rectum or bladder, it may be followed by formidable symptoms and speedily prove fatal. (*Boyer, Dupuytren.*)

An operation, however, is practicable only when there is quite a thick layer of cellular membrane —

in the situation of the vagina—between the rectum and bladder, through which the instrument can pass without injury to either. This point can be ascertained by introducing a sound into the bladder and the fore-finger into the rectum; in the next place, we should ascertain whether the uterus is in its natural situation. The operation being determined on, an assistant holds the sound, in the bladder, with its point turned towards the hypogastrium, whilst the operator plunges his knife in the presumed direction of the vagina. The scalpel should have a long and narrow blade, and be pushed in flatwise, and directed by the fore-finger still in the rectum. The cessation of resistance and the issue of a few drops of a blackish, viscous fluid indicate that the uterine cavity is opened. The orifice is now to be enlarged laterally; but incisions forwards and backwards must be made with extreme caution; as a general rule, it would be better to omit them altogether. Instead of the scalpel, the trocar may be used in making the puncture; and the aperture afterwards enlarged with the knife and director, if necessary. The wound is to be kept properly dilated either by lint, or by a gum-elastic tube, the size of which should be gradually increased, with the view of dilating the passage sufficiently to prevent any future inconvenience.

If the layer of cellular membrane between the rectum and bladder be very thin, an operation is impracticable; the sole resource is puncture of the uterus through the rectum, by means of the curved trocar. It is an operation, however, which is generally followed by very grave symptoms, though Boyer mentions only one case having a fatal termination.

The vagina may be freely open, and the obliteration seated in the neck of the uterus. This disposition may either be congenital, or the result of ulceration, instrumental parturition, or amputation of the neck. The obstacle may exist either within the neck, or at its entrance; in the latter case, it is apparently a continuation of the internal membrane of the vagina. (*Boyer.*) Having ascertained, from the previous circumstances and careful examination that the uterus is not developed by pregnancy, but distended by a fluid, we endeavor, by means of a common probe, to effect a passage through the neck; if it is not possible, the obstruction must be punctured by a scalpel or trocar. Having penetrated into the cavity of the uterus, a gum-elastic tube is introduced and left in the passage for some time; after a while a female catheter may be substituted.

Inflammatory symptoms, occurring after these operations, require the same treatment as that for simple incision of the hymen-membrane.

We have stated that, previously to operating, the patient's condition should be taken into careful consideration. If indeed no imminent danger be apprehended, if the accidents are limited to a few symptoms of metroperitonitis, without any signs of blood-accumulation above the obstacle, as in the cases already mentioned, it would perhaps be imprudent to subject a patient to the chances of an operation so dangerous in itself, and the results of which, relatively to the catamenia, would, to say the least, be very doubtful. The treatment, therefore, should be limited to prevention — by means of revulsive bleedings from the arm — of the symptoms

produced monthly by the *menstrual molimen*. If inflammatory symptoms show themselves, they must be subdued by antiphlogistics, more or less vigorous in proportion to their violence. This is the course which Lisfranc pursued towards the patient afflicted with complete, accidental obstruction of the vagina. The bare impossibility of introducing the penis would not, in his opinion, be a satisfactory reason for operating. He relates having been consulted by a young lady, recently married, whose vagina had so little depth as to render sexual union impossible; as no symptom, however, indicated the necessity of an operation, he did not think it right to undertake one for this reason alone. On meeting her a few years afterwards, he found that by constant efforts at sexual intercourse, the vagina had been pushed so far backwards, as to have acquired depth enough to accommodate the whole length of the penis.

CHAPTER III.

LEUCORRHEA.

ALTHOUGH this term expresses merely a symptom of vagino-uterine disease, we have retained it because employed by Lisfranc in his lectures.

A white discharge may proceed from the vagina alone, from the vagina and uterus together, or from the uterus separately, constituting respectively vaginal, vagino-uterine, or uterine catarrh. This disease has been variously designated. It is more commonly known at the present day, when in its acute stage, by the names of *vaginitis*, *metro-vaginitis*, *blenorragia*; and, when in its chronic state, by those of *vaginal discharge*, *whites*, *leucorrhœa*, *blenorrhœa*, &c. We shall retain the term *catarrh*, describing it in its acute and chronic stages, the two sole forms which it ever presents.

Vagino-uterine catarrh, whether acute or chronic, may occur spontaneously, or may depend upon the principal causes of uterine disease generally. The influence of an herpetic or scrofulous taint in the constitution, and of the second dentition, has been remarked; even the seasons (spring and autumn), also a soft, lymphatic temperament, &c., are not without their share in its production. Most frequently, the acute stage is the effect of a direct cause, either mechanical or chemi-

cal, such as abuse of coition, disproportion of the genital organs, repeated masturbation, introduction into the vagina of hard, irritating bodies, contusions, lacerations, instrumental labor, contact of syphilitic virus.

The chronic occasionally follows the acute stage. It is likewise very frequently primary. Lisfranc has particularly noticed the effect of foot-stoves and coffee in its production — the discharge succeeding their use almost immediately. Finally, the discharge is frequently like its cause, intermittent; thus it sometimes appears during the two or three days following the catamenia.

1. *Progress and symptoms of acute vagino-uterine catarrh.* — Like most acute diseases, vagino-uterine catarrh usually presents two quite distinct stages. It increases for some days; then gradually diminishes, and either ceases entirely or else passes to a chronic state. This inflammation has occasionally been seen to disappear suddenly, as is sometimes the case with gonorrhœa in men. It is apparent that the duration of these stages will vary according to the severity of the inflammation, and especially to the manner in which it is treated. By judicious remedial measures, Lisfranc succeeds in curing the majority of cases of acute catarrh in twenty or twenty-five days, whilst authors assign thirty-five or forty as its limit. There are, undoubtedly, cases in which the disease proves obstinate and requires a longer time for its cure; but then, again, there are others in which it is removed in a few days. There is no rule in medicine without its exceptions.

Whatever the duration of the disease, it generally

presents the following symptoms. Frequently without assignable cause, a troublesome pruritus is felt in the genital parts; it extends quite rapidly until it reaches the uterus; and there it is united with a sensation of heat and weight in the pelvis. The hypogastrium becomes tense and tender to the touch. The uterus seems to exert a painful pressure upon the perinæum, which is likewise tense. Dragging pains are felt in the loins, shooting thence towards the groins, hips, sacrum, and the inner and upper part of the thighs. There is frequent desire to urinate. The tumefaction of the more deeply seated parts often extends to the external organs of generation, and renders walking or standing insupportably painful; the inflammatory swelling of the larger labia may indeed be so excessive as even to prevent the patient from sitting.

These symptoms are usually accompanied by nausea, lassitude, general indisposition, and sometimes by pains in the joints.

About the third or fourth day — if the disease be not checked by appropriate treatment, or any other cause — there flows from the vulva a transparent, viscid liquid, which resembles a strong solution of gum, and which soils the linen like semen.

This mucous secretion — the quantity of which is at first small — excoriates the parts over which it flows. It gradually increases in quantity, becomes thinner, acquires a greenish-yellow tinge, and approximates more nearly to pus. As the inflammation proceeds, the symptoms above mentioned are more strongly developed. There are uterine spasms; a constant and distressing desire to micturate; the urine is white and

clouded, and, when it touches the swollen parts, it occasions a very painful sensation of burning, and — if the inflammation has extended to the mucous membrane of the urethra — its passage is accompanied by a sensation of scalding, which is absolutely insupportable. Defecation likewise occasions pain, especially when the *fæces* have remained in the rectum any time. Under these circumstances, febrile symptoms not unfrequently occur.

When this stage has lasted six or eight, or, according to some writers, ten days, the inflammatory symptoms gradually diminish; the discharge becomes thicker, and its color, white or greenish; both it and the scalding, by which it is accompanied, progressively diminish. After many variations in its color and consistency; after alternately disappearing and unexpectedly returning, it finally stops in the time above mentioned, unless when it passes into the chronic stage. In some rare cases of severe inflammation, a false membrane forms in the interior and lines the cavity of the uterus, from which it is expelled in shreds, after a longer or shorter time.

The phenomena do not always observe this regular course. Not unfrequently the inflammatory symptoms, after having nearly disappeared, recommence with fresh violence, sometimes without any known cause, sometimes from imprudence on the part of the patient. These changes it is well to note; in speaking of the treatment we shall take occasion to revert to them and show their importance as indications of treatment.

It is not indispensably necessary, in order to constitute acute catarrh, that the symptoms should be se-

vere. They vary in degree according to the violence, seat, and extent of the inflammation, mode of life and temperament of the patient, cause of disease, and an infinity of circumstances which it would be tedious to particularize. "Most frequently, indeed, in vaginal blenorragia either with or without urethral discharge, the vagina has proved to be indolent, unless when touched or rubbed by foreign bodies; in some cases, we have been able to introduce the speculum even during the acute stage, without occasioning pain; but in others coition, the least touch indeed, was insupportable." (*Ricord.*)

The inflammation, when intense, is rarely confined to the internal membrane of the vagina and uterus; it affects, quite frequently, the erectile tissue of the former, and the parenchyma of the latter to a greater or less depth. It may extend even to the peritoneal surface of the uterus and produce all the symptoms of metro-peritonitis. Abscesses have frequently formed in the groins, and in the substance of the larger labia; and inflammation of the bladder has, under some circumstances, succeeded to urethritis. The physician, when called in time, should in this case employ every means calculated to arrest the progress of the inflammation; usually, it is in his power to limit its extension. If however applied too late, all that remains for him to do is to treat the symptoms already developed.

The cure of vagino-uterine catarrh is not always complete, notwithstanding appropriate treatment. The tissues, which were at first more or less injected and swollen in consequence of the inflammation, do not in

every case gradually return to their normal state, but are sometimes affected by serous-like infiltration. The rugæ of the vaginal mucous membrane remain developed, as they were during the stage of inflammation; their color, however, changes from red and even purple to paleness; the rest of this internal membrane undergoes the same change. Sometimes, however, its thickness and density increase at the same time that its sensibility diminishes; this state of induration is recognized by pressure with the fingers, the sensation resembling that from a tissue nearly cartilaginous. Ulcers of greater or less size, sometimes scarcely visible, are formed in the vagina and about the neck; even gangrenous sloughs have been the result of severe inflammation. Finally, the acute stage, when it supervenes upon preëxisting chronic catarrh, may disappear without carrying with it the previous disease, which it sometimes merely aggravates, and sometimes cures.

Under these circumstances, the discharge, instead of stopping, derives a fresh increase from the morbid change in the tissues, shows the disease to have become chronic, and indicates an entirely different course of treatment.

Scirrhus ulcers of the neck of the uterus; fibrous tumors either of the vagina or uterus; engorgement of the uterus; in short, every disease of the genital organs may complicate acute catarrh, either of the uterus, or of the vagina and urethra, separately or conjointly; other organs, also, may be affected at the same time. We shall presently see the inferences to which these facts lead.

2. *Symptoms and course of chronic vagino-uterine*

catarrh. — Chronic vagino-uterine catarrh, whether it be consequent to the preceding, or primitive, is generally characterized by great irregularity in the course of its symptoms. In this stage, there is frequently either no inflammation at all, or else it comes on at uncertain intervals; sometimes also it is periodical, like the cause from which it originates, as, for example, when it occurs at each menstrual return. The discharge is the sole constant and pathognomonic phenomenon. This stage of the disease is frequently of indefinite duration, and has scarcely any tendency to a cure, except in cases where, being dependent upon slight inflammation, it disappears with the cause which developed it.

Most of the local symptoms above mentioned are present now, though in a less degree and frequently intermittent. It is quite common to experience no other symptoms at the commencement, than a vague sensation of weight in the lower portion of the pelvis and a slight, scarcely visible tumefaction of the hypogastrium; there are rarely any symptoms of severe irritation present, unless produced by some recent cause. In this simple form, catarrh may exist for a long time without an injurious effect upon the system. There are, indeed, women whom it does not trouble at all, or so little that they scarcely think of it. Of this number are those with whom leucorrhœa is not habitual; as when, for instance, it occurs only at the approach of the catamenial period, after the ingestion of certain articles of food, from unusual local irritation, and when it follows suppression of some slight evacuation.

But, if the disease is of long standing, and the discharge profuse and almost constant, as is frequently the

case with delicate, lymphatic women, whose integuments are pale and flabby, the system is usually and quickly much disordered. The uterus becomes engorged, and, in consequence of its strict relations with other viscera, a series of sympathetic phenomena, common however to most diseases of this organ, is soon developed. One of the most frequent of these phenomena is dragging pains in the stomach, which are severe in proportion to the intensity of the uterine irritation; they are, frequently, so distressing, that the patient herself considers the stomach as the seat of all her suffering; occasionally, even vomiting takes place.

Those symptoms of a graver character, which have been attributed to *vagino-uterine catarrh*, were in all probability owing to disease of the uterus itself; and it is to disease of this latter, probably, that the remark of the father of medicine applies; *si fluori supervenerit convulsio, malum est*. A gradual diminution of the discharge and the successive disappearance of all the symptoms indicate, if not a cure, at least a tendency towards it.

We have stated that the discharge is sometimes intermittent or periodical, like its cause. Lisfranc has met with a fact yet more singular, and almost unparalleled, in a woman having engorgement of the uterus. Five, ten, fifteen, or twenty days after her catamenia, a few precursory symptoms, apparently indicating their reappearance, would manifest themselves without any known cause; and soon a flow of serum would follow, so profuse as to require the use of napkins, and so acrid as to irritate the larger labia and the skin of the inner and upper part of the thighs, and occasion smart-

ing, and lancinating pains. At the expiration of two days, all the phenomena with the exception of a slight weight in the pelvis entirely disappeared. Is this a case of what the ancients designated as dropsy of the uterus? To avoid any error, and be perfectly satisfied that the fluid did not accumulate within the uterus, Lisfranc examined it with the most minute attention, by the vagina, rectum, and hypogastrium; with the exception of the additional size caused by its engorgement, the volume of the uterus always remained the same. Still further; at different intervals he passed the extremity of a bougie into the cavity of the uterus, but nothing was ever found there. This flow of serum was consequently occasioned by rapid exhalation from its internal surface.

The discharge is not always white, as the term, *white flux*, would lead one to suppose. Aristotle designated it *white menses*, in contradistinction to the usual monthly evacuation. Even when the disease is too recent to have produced any morbid, structural change, the physical qualities of the discharge usually vary according to the part by which it is furnished. It is easy to ascertain the nature of the secretion from the more deeply seated parts, by means of the speculum, the introduction of which is rarely contra-indicated by inflammation, as this is, generally, slight. The vulva pours forth quite abundantly a colorless or whitish fluid, viscid and thin, of a strong and well known odor. The vagina and neck secrete a matter, whose consistency varies from that of thick mucus to a puriform secretion; most commonly, it is milky white, slightly yellowish, often grumous, and less odorous than that

from the vulva. Between the lips of the os tinæ, we find semi-transparent, sometimes opaque, albuminous flocculi, viscous, adherent, very similar to the vitreous humor, and very often difficult to be detached even with a mop.

No correct opinions as to the locality of leucorrhœa are to be found until the time of Charleton, Bonnet, and Morgagni. The course which was then marked out, has since been followed; the physician looks, *touches*, and examines scalpel in hand. The ancient writers, since the days of Hippocrates, enjoying none of the advantages of pathological anatomy, abandoned themselves to the extravagances of fancy, as to the seat of vagino-uterine catarrh. Imagining that they saw in the discharge the different fluids of the system, such as the milk, the chyle, the serum, lymph, bile, &c., they regarded the uterus as a general emunctory; *uterum*, says Hippocrates, *non modo ad conceptionem mulieribus indidit, verum etiam ad earumdem repurgationem; ita ut velut sentinam quandam, eundem infra collocarit, quo totius corporis impuritates facilius confluere valerint.*

If we were to enumerate all the possible complications of leucorrhœa, it would be requisite to mention all the diseases of the genital organs, by each of which it is very frequently maintained. In this case, the complication becomes the essential object of consideration.

3. *Diagnosis.* — After having divided and sub-divided leucorrhœal discharges according to their causes, all authors confess their inability to distinguish the species which they have themselves created. The

points which we think important to be known are, 1. whether the white discharge proceeds from an acute or chronic disease; 2. whether the discharge is essential, that is to say, dependent upon catarrhal disease of the internal surface of the genital organs; or whether it is symptomatic of another disease more or less serious; 3. whether its nature is syphilitic.

If the symptoms which have been described leave any doubt as to the existence of the disease, the discharge will remove it; we shall presently see how we can ascertain whether it is essential or not. It is true that, at the commencement of acute leucorrhœa, secretion is suspended; but there are other signs which will serve as a guide. If the inflammation is seated near the vulva and the lower portion of the vagina, they are red, tumid, hot, and painful. This point we can verify by simple inspection, after gently separating, if necessary, the larger labia. When the signs are visible around and at the entrance of the urethra, and the passage of the urine occasions scalding, there is every reason to believe that the inflammation has penetrated more or less deeply into its canal. Still further, by introducing the fore-finger into the vagina, and pressing from behind forwards upon the urethra, pain more or less severe is felt; and, afterwards, when secretion has recommenced, by pressing in the same direction and from above downwards, we can press out a matter varying in its aspect according to the state of inflammation in the mucous membrane.

When the disease commences in the upper portion of the genital organs, we cannot have the assistance of sight in verifying its existence. The use of the spec-

ulum is peremptorily contra-indicated ; its introduction would aggravate the symptoms by distending the tissues, which are usually quite painful. The touch, under these circumstances, finds the tissues whereon the inflammation is seated tumid, dry, and hotter than common, and generally tender on slight pressure ; this mode of examination however has its disadvantages ; and it is prudent to abstain from it unless it be absolutely necessary to ascertain the seat of the disease and the disease itself, or that the vagina is not entirely indolent. The principal object, indeed, of the diagnosis is to establish an appropriate course of treatment ; if inflammation be present, no matter where, the single indication is to subdue it, by means which will be pointed out. Moreover, at the expiration of a few days, unless the inflammation suddenly disappear, the discharge commences and removes all uncertainty.

Pus, proceeding from abscesses in the ovaries, abdomen, or cellular tissue of the inferior portion of the pelvis, and flowing outwardly through the genital organs, might be confounded with a leucorrhœal discharge. But purulent matter has a peculiar odor and consistency ; the extreme fetor of that which is formed about the rectum is well known. If any uncertainty remained, it would be easy — by means of the touch, and especially of the speculum after the inflammatory phenomena had been subdued — to distinguish in most cases the spot whence the matter flowed. In cases of purulent collection in the ovaries, in which the pus, passing through the Fallopian tubes, flowed from the inferior opening of the uterus, the diagnosis would be more or less facilitated by antecedent symptoms, existing in the point corresponding to the diseased ovary.

It is very important, as respects the treatment, to distinguish the pure and simple leucorrhœal discharge from that symptomatic of organic affection of the uterus. The knowledge to be derived from its physical qualities is more or less indefinite. However, in carcinoma of the uterus, the matter secreted has a fœtor which, if not characteristic, is at least sufficient to attract attention. Lancinating pains, independent of other symptoms, are pretty generally significant of uterine disease. But all uncertainty is at once removed by immediate exploration, either by touch or the speculum.

It is a point of deep interest to be enabled to distinguish the matter of syphilis from that of a different character, from that, for instance, proceeding from local irritation. To say nothing of its effect upon the treatment, it would clear up a very important point in legal medicine. But hitherto our means of diagnosis have proved insufficient. A syphilitic discharge possesses no peculiar character by which it may be distinguished, notwithstanding numerous assertions to the contrary. Thus Graaff, Charleton, Van Swieten, and some more modern writers, maintain that its locality is a sufficient means of diagnosis, that syphilitic leucorrhœa occupies the vulva and urethra. Fernel, Levret, and Pitcairn formed their opinion from the color, odor, and density of the secretion. Having said thus much of the errors of these writers, we repeat that, in the actual state of the medical art, the point in question is involved in the deepest obscurity.

The period of incubation, which, one would suppose, might throw light upon the diagnosis, is almost

valueless. To form a correct judgment of it too many circumstances are necessary to be known, such as total absence of every other cause, of any previous chronic discharge, the non-repetition of sexual intercourse after a suspected impure connection ; moreover, the discharge, before showing itself at the vulva, may have stayed a longer or shorter time in the upper portion of the genital organs. It is, besides, well known that leucorrhœal matter—even when there is every reason for supposing it not to be syphilitic—will sometimes excite urethritis in man ; why should not the contrary occur ? Finally, incubation is only the time which elapses from the moment of infection until the appearance of the symptoms, and this time is very indefinite. But other causes have their period of incubation also ; their action is not, in general, immediately followed by symptoms of inflammation ; what then constitutes the difference ?

The contagious properties of syphilitic matter cannot be doubted ; but how can they be detected ? When we reflect that repeated coition when the vagina is affected by simple inflammation only may induce urethritis in man and that a chronic discharge is not usually contagious, it would seem as though a contagious quality of variable intensity were developed in it whenever previously existing irritation in the vagina was aggravated by any excess. It is moreover stated by one physician “that if a man contracts gonorrhœa from a woman having a true syphilitic discharge, and continues to have intercourse with her after getting well, he does not again contract the disease, *being, as it were, acclimated* ; but an accidental visiter would in

his turn get a gonorrhœa, and when he was cured he would, like the former, acquire the privilege of immunity ; and so of a third, and a fourth."

The contagion of white discharges has been recognized from the remotest periods of antiquity. Thus we read in the third book of Moses, chap. xv. verse 2 ; *Vir, qui patitur fluxum seminis, immundus erit* ; and verse 4 ; *Omne stratum, in quo dormierit, immundum erit, et ubicumque sederit*. Hippocrates, Galen, Pliny the Younger, &c., mention pustules and chancres occurring on the genital organs *post coitum cum fœdâ muliere*. (Lisfranc, *Lectures at La Pitié*, and *Inaug. Thesis.*, Paris, 1813.)

On this point Lisfranc states it as his opinion, that the venereal disease was not brought into the eastern hemisphere by the sailors of Columbus. They merely communicated it with its peculiar characters in warm climates, rapidity and violence of symptoms. This unusual course of the disease attracted the attention of physicians to its nature, which till then had not been understood ; the disease itself, notwithstanding, had previously existed. It is an every-day occurrence, that individuals, coming from southern climates, communicate syphilitic diseases far more severe than any observed in our climate.

After the return of Columbus, physicians fell into the opposite extreme, regarding as syphilitic every discharge of which the cause could not be discovered by their imperfect means of investigation. Mere inspection of the color and consistency of the matter satisfied them perfectly as to its nature. This species of charlatanism has been perpetuated and still exists. From

that time all leucorrhœal discharges were considered syphilitic, until Swediaur restored the old belief, by demonstrating their very frequent dependence on the causes which have been enumerated.

Finally, inoculation has not yet succeeded in removing the difficulty of diagnosing virulent and simple discharges. On the one hand, Hunter states that the matter of gonorrhœa can produce either gonorrhœa or chancre; on the other, Ricord has found that if gonorrhœal matter, taken from the mucous surface of the vulva, vagina, or uterus when there were no chancres present, was inoculated, it produced no effect whatever; whilst the matter from the surface of a chancre invariably generated its characteristic pustule. His experiments have been very numerous, and thus leave the question of diagnosis no clearer than before.

The coincidence of chancres or pustules on the mucous membrane, on the contrary, would of itself dispel all kind of doubt or at least render it unnecessary, as, without attempting further distinction, their existence would be made the basis of treatment. Except in these cases, we must trust to the patient's statements and our own investigation into the previous circumstances. Still greater circumspection is requisite when a woman, suffering from leucorrhœa, has been exposed to the contagion of syphilis; the inflammatory symptoms and the changes in the qualities of the matter might possibly be owing to accidental inflammation just as well as to a specific cause.

It has been asked whether gonorrhœa could induce the symptoms of confirmed or constitutional syphilis. On the solution of this question, and its connection

with the treatment, depends the importance of the diagnosis which we are endeavoring to establish. Numerous facts are to be found every where in support of the affirmative, an opinion in which Lisfranc fully concurs. (*Thesis* 1813, and *Académie de Médecine* 29 Dec. 1834.)

4. *Prognosis.* — Vagino-uterine catarrh, in its acute stage, is not usually a serious disease. The inflammation being in most cases superficial and, in a degree, erysipelatous, is easily subdued, and almost always gives way to rational treatment. Frequently, indeed, repose, emollients and some attention to diet will bring it to a happy issue.

But, when the inflammation is deeper and assumes a phlegmonous character, its consequences are much more serious. Abscesses may form around the vagina and occasion disorders of greater or less extent; deep-seated metritis and metro-peritonitis have more than once succeeded catarrhal metritis. Cases are reported, in which inflammation of the vagina, occasioned by pressure from the head of the fœtus in instrumental labor or by imprudent manipulation, has been followed by gangrene of variable extent, which has terminated in recto or vesico-vaginal fistulas—a disgusting disease, the cure of which is usually very difficult and, in many cases, even impossible. Metro-vaginitis may also terminate in occlusion of the Fallopian tubes, causing sterility, or by adhesion sometimes of the entire circumference of the vaginal walls, as in the patient, ward St. Augustin, whose case we have mentioned; in this instance, the inflammation was occasioned by instrumental labor. Finally, inflammation so intense may be attended by fatal results.

In its chronic stage, leucorrhœa is, generally, a tedious, disagreeable, uncomfortable disease, and one which may, eventually, induce serious alterations in the tissues whereon it is seated. Though frequently owing to a cause so slight that it cannot be discovered, and though essential in its nature, that is to say, dependent upon catarrhal disease of the mucous membrane, it finally, sometimes quite speedily, determines engorgement of the uterus and ulceration of its neck. The prognosis, then, turns upon these latter affections, of which the discharge is merely a symptom.

The prognosis, it is apparent, varies with the cause, the duration, and the profuseness of the discharge; with the age, strength, and hygienic circumstances of the patient. It will be modified, more especially, by the pathological alterations in the tissues, and an infinity of circumstances which it would be tedious to enumerate.

Thus leucorrhœa arising from temporary causes, such as local mechanical irritation, the ingestion of certain aliments into the stomach, difficult menstruation, is occasionally cured without trouble or even spontaneously. The air of the country is sometimes sufficient, when it is occasioned by residence in a populous city; and sometimes the restoration of a repelled exanthema or a suppressed evacuation. Finally, the appearance of the catamenia in girls at the age of puberty, and a first pregnancy or child-birth with others have simultaneously removed it and its cause.

Pathological alterations may and frequently do exist in the tissues without visibly affecting the general health; in such cases, the cure is more difficult.

When leucorrhœa has become constitutional, a sort of necessary emunctory to the system, and especially when it is complicated by chronic or latent phlegmasia of other viscera, particularly of the lungs, or when there is predisposition to phthisis or scrofula, the prognosis is of a graver character. Finally, the danger is imminent if the profuseness and long duration of the discharge have ruined the constitution and induced marasmus and all the symptoms of hectic fever.

Leucorrhœa accompanying the critical age is in general merely symptomatic. At a later period it quite frequently denotes some affection or another of the uterus; it having been remarked by Hippocrates, that this kind of discharge was incurable when it occurred to those who were advanced in years.

Does leucorrhœa, as Hippocrates asserted, invariably cause sterility? The remark cannot certainly be understood without qualifications, for in large cities we see too many instances to the contrary. It is more correct to say, that leucorrhœa is quite a frequent cause of abortion, consequent on vascular determination to the uterus occasioned by constant irritation from the disease, and produced, in this case, by a cause similar to that which induces it when conception occurs near to the menstrual period. The sterility of women affected by this disease has also been explained by the repugnance which is felt towards them, a rare circumstance certainly, for it is well known how sedulously they conceal the fact.

Before passing to the treatment, we will say a few words on the suppression of leucorrhœal discharges. It may occur suddenly from the influence of physical

causes, exposure of the extremities, more particularly, to burning heat, or to cold, developement of another phlegmasia, improper use of astringents or of those secret medicines in which the cupidity of charlatanism traffics. Finally, it has been said that they may be arrested by, even as they originate from, moral causes. The danger of their sudden suppression is in proportion to the profuseness and long standing of the disease. A nosological chart would be required were we to set forth all its recorded evil consequences.

The ancients, in particular, have wonderfully magnified these harmful effects; indeed, they were absolutely fearful of attempting the cure of leucorrhœa. This feeling, however, originated in their idea of its situation and nature. It is curious, certainly, to find these same ancients — after having written pages without number upon the danger of curing leucorrhœa — exhausting the whole *materia medica* in attempts to effect it, and resorting to secret remedies and to recipes, each one of which is more ridiculous and absurd than the other.

It is not uncommon to find practitioners, even at the present day, persuading women that this disease is a salutary outlet and the source of their health. Ignorance has many a time shielded itself beneath the pretended danger of suppression; and many are the victims which it has left to perish. It is impossible to conceive the credulity of those physicians even who have but little acquaintance with this class of diseases, when they daily witness the sufferings brought upon the wretched and confiding victims of the cupidity of charlatanism. No other disease ever offered a wider field to the enter-

prise of empirics and patent-medicine-venders, always ready to make a traffic in the ills of humanity.

But, without descending to empirics and ignorant pretenders in the profession, it may be asserted that the treatment of leucorrhœa has generally been conducted without the least attention to recognized principles. It has been directed entirely against the chief symptom, the discharge, without any investigation as to the possible cause of its continuance. The want of success of the ancients, often indeed the evil consequences which ensued, were owing to a similar course of proceeding. We might say the same of modern practitioners. In a work recently published, after some general remarks upon chronic leucorrhœa, the exclusive and immediate employ of tonics and astringents, without any indication for their use, is stated as the basis of treatment. It is not surprising that precepts so injudicious should daily meet with failures and even be followed by repeated ill effects. The deficiencies of this mode of treatment will be more striking when compared with our own.

The main principle of treatment is boldly to attack a disgusting infirmity, burdensome to its possessor and which, if left to itself, ultimately induces serious alterations and endangers the reproduction of the species. But, in so doing, we must beware of working in the dark. The general condition of the organs is, in the first place, to be carefully examined; and then each indication of treatment will rise directly from the acute or chronic character of the disease, the pathological alteration of the tissues, and the constitution of the patient. We must vigilantly watch the action of the

means used, always ready to suspend or to modify them according to their effects. The cure must be brought about in a slow and gradual manner, so that the system may return to its normal condition without any violent change ; and if, in spite of this mode of treatment, both rational and medical, which we have found so successful, derangements of other organs should supervene, we are always in readiness to combat them and, in the majority of cases, to arrest their progress.

5. *Treatment.* — The principles by which we are to be governed in selecting appropriate means of treatment are the following ; 1. The acute or chronic stage of the disease ; 2. Organic alteration of the diseased tissues ; 3. The patient's constitution. We might also add the nature of the discharge, or, of the disease, in case of suspicion of syphilis.

Of the acute stage. — The first object is to arrest or remove the cause of irritation. The application of this principle, however, cannot be general ; as for example, if the symptoms were occasioned by the presence of a pessary, its extraction should be deferred until their violence was somewhat quieted ; otherwise, the manipulation necessary for the purpose might occasion serious consequences.

If the leucorrhœa is recent, and the mucous membrane, though more or less inflamed, is neither indurated nor ulcerated — the whole alteration being confined to simple vascular injection, with more or less turgescence — it is generally easy, by means of antiphlogistics, to remove the inflammation before its duration has caused degeneration of the tissues and established a right of possession in the system.

When the disease is mild and limited to a few, very slight, local symptoms, it is very frequently removed by rest, general bathing, emollient drinks, and an appropriate diet. Where the patient is rather feeble, and especially when the disease is in this first degree and dependent, moreover, upon an external cause, the treatment should be limited entirely to these measures for improving the general health.

If, on the other hand, the patient is of a strong constitution and full habit, and the disease is attended by weight in the pelvis, pains more or less severe in the pubis and groins, by tumefaction of the organs, and tenderness of the hypogastrium, more energetic antiphlogistics are indicated. Blood is to be drawn from the arm in proportion to the forces of the patient, the catamenial period being always taken into consideration. If it is near at hand, venesection must be deferred, otherwise we incur the risk of deranging its return; this is usually an unfavorable occurrence, as the appearance of the menses, under these circumstances, has more than once either removed or else much diminished the inflammation. If the symptoms persist and the strength of the patient remain good, the bleeding may be repeated, with the double advantage of depletion and powerful revulsion at one and the same time. In leucorrhœa, as well as in recent affections of the uterus, Lisfranc dissuades the application of leeches to the pelvis, unless symptoms of peritonitis exist. We have before stated the reasons why he differs, in this point of practice, from the profession generally.

Conjointly with venesection, we direct emollient injections, nearly cold, administered in the manner pre-

vously described ; long-continued general baths ; and emollient drinks in quantity, emulsions, and ptisans, slightly acidulated, which will have the additional advantage of rendering the urine less acrid and consequently less painful in its passage, more especially if the urethra participate in the inflammation. If, at the same time, a mild and vegetable diet, composed of articles of little nutriment, be enjoined, the inflammation may be subdued, usually, in a few days. But if, notwithstanding its subsidence, the discharge still continues, we administer copaiba or cubebs by the mouth — the most favorable mode of administering them — unless contra-indicated ; if gastric irritation exist, they are to be given in encmata.

The balsam of copaiba is very irritating to the stomach, and so offensive to it that many patients are unable to make use of it. It has been prepared in such a manner that its digestion is made much easier ; in the common forms of pills, it is more agreeable than in a fluid state.

Cubebs is generally less irritating and oppressive to the stomach. Yet in some cases it does not answer so well as the preceding article, and *vice versâ*. The commencing dose, whichever of the two may be preferred, should be small, and after a few days gradually increased, its use being instantly suspended if the irritation exceed a proper limit. A mixture of these two medicines has been supposed to produce more certain effects ; but we cannot say whether experience has confirmed this opinion.

If obliged to administer copaiba by the rectum, six drachms of it are to be beaten up with the yolk of an

egg and mixed with a sufficient quantity of water to form a small enema; the addition of a half or whole grain of the extract of opium will much increase its favorable effect. The enema must be retained. Where enemata can neither be taken nor retained, this mode of administration is, of course, inadmissible. Lisfranc has seldom seen it act efficaciously without the production of slight colic pains.

As the sensibility of the large intestine varies in every individual, the dose of copaiba above stated—if it do not excite the necessary degree of irritation—is to be increased by one or two drachms. If, on the contrary, the irritation is too great, we suspend its use for twenty-four hours, and recommence with smaller doses. At the expiration of two or three days, the dose is to be gradually increased again, as the mucous membrane has become proportionally less sensible to the action of the medicine.

This is an excellent mode of administration and never induces the unpleasant symptoms which affect the primæ viæ when it is taken into the stomach. Its use must not be abruptly suspended as soon as the running stops, for it would in this case be liable to return; but it is to be continued, in gradually diminishing doses, until the mucous membrane has had time to recover its healthy condition.

Though the use of turpentine, ammoniacum, the buds of the Canada pine, &c., is beneficial under some circumstances, still it is less generally so than that of the copaiba and cubebs. In fact, experience has shown that, besides their derivative action upon the intestinal canal, these latter act specifically upon the

genito-urinary system ; it is therefore idle to endeavor to substitute for them saline or vegetable cathartics.

In conclusion, it will be seen that acute vaginal catarrh presents two distinct indications of treatment ; first, the use of antiphlogistics as long as the inflammation persists ; secondly, if necessary, of revulsives. The effect of these latter might be assisted by astringent injections. But, in acting directly upon tissues recently inflamed, we should recollect that their tendency to relapse is in proportion to the shortness of the interval since they were affected ; the liquid of injection should, therefore, be very weak at first, and afterwards gradually increased in strength.

The disease usually gives way to the proper application of these means, and the cure is effected in a few days. It is apparent however that this mode of treatment would be frustrated, if not favored by rest of the diseased organs in particular, and by a carefully regulated diet, appropriate to the strength of the patient and the progress of the inflammation. Excesses of any kind would be a constant source of irritation and would renew the inflammation even if it had been already subdued.

Of the chronic stage.—Whether this stage be primitive or secondary, the first point is a careful examination of the uterus and vagina, in order to be satisfied that the discharge is not kept up by any chronic morbid alteration in the tissues. We often, indeed, find infiltration or induration of the walls of the vagina, engorgement of the uterus, ulceration of the vagina or neck—an observation which has been claimed as novel, but which was made thirty years

ago by Viguerie — and finally vegetations. It is apparent that these circumstances will essentially modify the treatment. In such cases, revulsives might occasionally arrest, for a time, the anormal secretion, dry the mucous membrane, if this expression be thought preferable, but they could not cure the structural alteration; they do, on the contrary, sometimes succeed in permanently arresting the discharge when it is not maintained by any organic disease.

If ulcers exist, they are to be cauterized, with the precautions which will hereafter be stated. If the mucous membrane is indurated or infiltrated, resolvent frictions with the ointment of the hydriodate of potass or the mercurial ointment are to be made on the hypogastrium or the inner and upper part of the thighs; or, if it can be borne, a strip of lint smeared with mercurial ointment may be introduced into the vagina. Vegetations, when small, may be cauterized, and excised, if of larger size. Finally, recourse may be had to injections of various kinds.

Uterine catarrh frequently proves obstinate without any discoverable alteration in the tissues to account for it; in such cases, injections are recommended. For a long time, physicians were afraid to throw injections into the cavity of the uterus; Hippocrates, however, recommended the practice, and Viguerie, towards the close of the last century, renewed it. To do it safely nothing further is requisite than proper precautions; the first injections should consist of pure water; and their activity be gradually increased by astringent and styptic decoctions or solutions, to which additional strength may be imparted by adding from time to time a few drops of some concentrated acid.

These injections may be thrown into the uterus through a gum-elastic tube, cautiously introduced into its cavity, and by this means we may succeed in curing a leucorrhœa which has resisted all other remedies. Ricord has proposed, for the purpose of making these injections, a syringe consisting of a double cylinder, with double piston-rods working separately; into one of them he puts the medicated liquid, intended to effect a change in the state of the tissues, and into the other pure water, to be injected immediately afterwards, without removing the instrument. This syringe, though undoubtedly very convenient, is expensive, and objectionable from its complexness, and its purpose is very well answered by the simple gum-elastic tube.

Injections effect a cure in different ways; some times arresting the discharge instantly, as it occasionally happens in the gonorrhœa of man; but, even in this case, their use must be continued for some days: at others, acting more slowly and requiring from twenty to twenty-five days—in these two cases, they are to be made, by degrees, more frequent and more powerful. At other times they convert the chronic into acute inflammation, which frequently lasts seven or eight days. When the leucorrhœa is of long standing and has resisted every other means, we must endeavor to effect this change. The new inflammation increases the vital properties of the organs; if necessary, it is to be kept within bounds by frequent bathing, general and revulsive bleeding, emollients, a light diet, &c. The injections however are not to be omitted; their daily use will contribute to diminish the very inflammation which they had at first excited; and, as in the

second mode of cure, twenty or twenty-five days will, likewise, suffice to bring about a successful result. As auxiliary to the medicinal treatment, the patient must take but little exercise; the drinks must be emollient and the diet diluent. If the slight excitement, which the injections continue to occasion, is raised by the diet beyond the limits necessary to a cure, the supervention of severe inflammatory symptoms is almost certain.

There are two cases in which much caution is required. Leucorrhœa, after having existed for a long time, becomes habitual and necessary to the system. It is frequently impossible to find a substitute for it, and imprudent to attempt it, especially where the patient is delicate and has any tendency to scrofula; and more particularly when she is advanced in life; in all other cases a supplementary issue must be previously established.

The suppression of intermittent leucorrhœa demands the same precaution as does that of menorrhagia. It is unnecessary to repeat our remarks upon that point. If, however, whilst carefully studying the constitution, we find that the leucorrhœa has succeeded the suppression of some discharge or the repulsion of an exanthema, it would be possible, either by renewing them or supplying their place by an issue, to effect a cure without any unpleasant consequences.

The last remaining point of consideration is the probable existence of syphilis. It having been demonstrated that constitutional symptoms can occur, the question is whether their occurrence is more frequent after an antiphlogistic than after a mercurial course of

treatment—it being an acknowledged truth that the latter does not always avert them—and whether, therefore, the treatment should be simple or specific; this is a point of immense importance and one not yet determined.

Lisfranc's opinion is decidedly favorable to the use of mercurials, of whose utility he expresses himself, in his lectures, fully and thoroughly convinced. In a discussion at the Academy of Medicine (29 Dec. 1834), he thus expressed himself; "To the facts already adduced to show the frequent occurrence of constitutional symptoms after antiphlogistic treatment, I might add a large number from my own practice; but I shall confine myself to a more general fact. For more than fifteen years, syphilis has been treated at Greenwich Hospital (London), by antiphlogistics alone; but constitutional symptoms of such violence occurred, that the directors of the institution were obliged to interfere, and, I have been told, the future employment of this mode of treatment has been forbidden. . . . When the character of the discharge cannot be distinguished, there is but one course to follow, and that is, to subdue the inflammation in the first place—the existence of which invariably prohibits the use of mercurials—and then, when this object is effected, to be guided by the most prominent indication in selecting that mode of treatment which strikes us as the most appropriate. One great benefit springs from all these discussions about mercury and antiphlogistics; they have directed attention to the great value of antiphlogistics, if not alone, at least in combination with other modes of treatment. Thus, in my clinical practice at La Pitié, in which I

always keep a few cases of syphilis for the instruction of the students, I have obtained striking success, in cases wherein mercury and sudorifics had failed, by uniting to them small occasional bleedings." . . . And again, "Whenever I feel doubtful and the patient is about to be married, I think it prudent to use mercurials for the prevention of constitutional symptoms." (*Gaz. Méd.* 3, Jan. 1835.)

I may be permitted to add with Sam. Cooper, that the administration of mercury (without any urgent indication) is not necessarily the best possible means of avoiding the supervention of constitutional symptoms. Reason and experience both forbid its employment with the intention of securing the patient's future immunity, inasmuch as mercurial treatment has often been found to occasion cutaneous eruptions, ulcers in the throat and nodes, which, otherwise, would not have supervened. (*S. Cooper.* p. 453. Paris, 1828).¹

¹ The necessity of making a local examination in leucorrhœa is more frequent than is generally supposed. The touch would, in many cases, lead to indications on which an appropriate and successful course of treatment might be established. I was more strongly than ever impressed with this conviction in the following case, which lately came under my care. The patient was suffering from very profuse leucorrhœa. She had been, twice previously, ineffectually treated by the usual routine of stimulants and astringents; but they rather increased than diminished the discharge. On examination, I found considerable prolapse of the uterus. The cervix was swollen, and communicated to the finger a sensation as though its mucous membrane were exceedingly thickened. The os tinæ was sufficiently open to admit the last joint of the forefinger. The body of the uterus was considerably enlarged, and its right side quite tender on pressure. This patient was confined to a recumbent position and a vegetable and farinaceous diet; used injections of cold water frequently; and took an alterative pill at night. The discharge gradually diminished, and finally ceased. I have heard from her twice since, and she remains perfectly well. Tr.

CHAPTER IV.

HYSTERIA.

THE reveries of ancient and modern medicine, as to the nature and seat of this affection, will not detain us long ; we shall merely quote the analysis of them by Brachet, grouping together identical or analogous opinions.

“ 1. — Some have believed, with Hippocrates, in the aberrations or travels of the uterus from its proper situation to others ; among these may be enumerated Are-tæus of Cappadocia, Primrose, Holler, Duret, and even Rivière.

“ 2. — A still larger number supposed the proximate cause of the disease — the seat of which they placed in the uterus — to be sometimes the retention, sometimes the putrefaction or some other alteration of the qualities of the semen or blood in this organ, and the distribution of a malignant vapor thence into all parts of the body producing the morbid phenomena of the disease, or else simple reaction of the uterus upon other organs. Of this opinion were Galen, Ætius, Fernel, Burnet, Baillou, Sennert, Mercatus, Chesneau, Rivière.

“ 3. — A certain number of more modern authors continued to regard the uterus as the seat of hysteria, but they supposed no other pathological alteration in its

condition than some modification or other of its special nervous system, which, speedily reacting upon the general nervous system, becomes the determining cause of the phenomena. Of this belief were Cullen, Pinel, Lieutaud, Vigarous, Baumes, Louyer-Villermay, Rapou, and even Pujol, who also admits chronic inflammation of the uterus, in addition to the disturbance of its nervous system.

“To this opinion is to be referred what has been said of the venereal appetites of the uterus and of clitorism, as causes of hysteria. From this circumstance, according to Willis, those affected by the disease were looked on with horror, *ut semi-damnati instar*, and their sufferings were regarded by the community merely as an earnest of just and merited future punishment.

“4. — Some — a small number, it is true — have, like Barbeyrac, imagined an acrid and bilious matter in the brain; or, like Cheyne and Perry, a humor in the blood; or, vitiated ferments, according to Lange and Chastelain; or finally, vapors, according to Jean-Maria.

“5. — A quite large number have regarded hysteria merely as a general nervous affection or as a vitiated state of the nervous and animal spirits, without any more precise seat than the nerves. Of this opinion are Dumoulin, Loob, De Gorter, Raulin, Pomme, Lorry, Whytt, Tissot, Ridley, Boerhaave, Hoffmann, Pressavin, Sauvages, Linnæus, Blackmore, Viridet. Under this head we might rank ataxia of the spirits, of Sydenham, and derangement of the central forces, of Barthez.

“6. — Charles-le-Pois, Willis, Barbeyrac, Schacht, and Georget, among others, have placed it in the brain exclusively. Amard locates it in the inferior portion of the spinal marrow.

“7. — Finally, some have placed it elsewhere than in these two principal viscera. Purcell, Piteairn, Hunauld, and Vogel have seated it in the stomach or its vicinity ; Highmore, in the lungs and heart ; and Stahl, in the vena porta.” (Brachet, *Rech. sur l'Hyst.*)

The majority of practitioners of modern days have thrown aside these errors — the greater portion of which are antiquated — and divided into two parties. One of them regards hysteria as a simple neurosis of the uterus ; the other believes it to consist in an irritation or slight inflammation of this organ, combined with nervous phenomena. Lisfranc allows the occasional correctness of both these opinions, though he admits the latter to be the more frequently true. His opinion on this point is not the result of pure and simple reasoning, but is based upon a large number of facts, which have come within the scope of his observation.

He has always found the uterus of hysterical patients, whom he is very frequently called to visit, very tender to the touch and in a state of turgescence combined with simple hypertrophy ; the form and size of the neck are such as it possesses at the second month of pregnancy.

Though hysteria is rarely fatal, it may be so occasionally ; Sennert states that in three cases necropsic examination showed traces of slight inflammation in the uterus. Other writers, also, have observed the connection, with symptoms of hysteria, of some more serious affection of the uterus, such as ulcerous destruction of the neck, the presence of a polypus, or engorgement in a greater or less degree, with irregular men-

stration. Pujol does not allow the existence of purely nervous hysteria, having uniformly discovered marks of chronic inflammation in the uterus. He thinks, moreover, that when the local affections finally disappear after long continuance, the nervous system may repeat the paroxysms from habit. Finally, this latter opinion is supported by the fact that hysteria is much more common among married than single women.

Lisfranc, being impressed with the idea that inflammation of the uterus is the point of departure of the divers symptoms of hysteria, lays great stress upon the use of antiphlogistics, by means of which he has succeeded in curing the larger proportion of his cases. The results of this mode of treatment are, consequently, a pretty convincing truth of the correctness of the opinion. The extraordinary success, moreover, which Pomme had from the exclusive employment of bathing and chicken-broth, is well known, though a recent writer attributes it rather to a *miraculous confidence* on the part of the patients, who, as he asserts, are too fickle-minded to submit to a treatment prolonged for many years.

The best effects, according to Lisfranc, are obtained from small revulsive bleedings from the arm. They cannot, however, always be practised. In these cases, particularly, they occasionally *erethise* (*agacer*), irritate the nervous system to such a degree, as to increase either the violence or the frequency of the symptoms — a plain indication to abstain from their employment. Under these circumstances, we resort to baths; the temperature of the water is regulated by the habits of the patient. It is not, certainly, very judicious to pre-

scribe them indiscriminately at a low temperature, simply because we wish to subdue nervous symptoms. Cold bathing, which tranquillizes one, irritates another; and, whilst the latter is benefited by a bath at a higher temperature, the former is injuriously stimulated. We also resort to small narcotized enemata, to antispasmodics — the effect of them upon the sensibility, as we have stated, is much better after previous venesection — to emollient injections nearly cold; to enemata; in short, to all the means which we shall, hereafter, find employed in simple engorgement. It is in these affections, more particularly, that the vagina contracts and rejects the liquid of injection; by perseverance, however, it will ultimately be retained. Finally, exercise or absolute repose is to be prescribed according to the state and habits of the patient.

The menstrual evacuation should receive particular attention. If the attacks occur simultaneously with the catamenia, we must endeavor to avert them by employing baths and narcotized enemata two or three days before their appearance, and a small revulsive bleeding from the arm a few days after their cessation. In short, the object is to facilitate menstruation; for, by preventing the constitutional disturbance which it occasionally causes, we may also hope to prevent the paroxysms of hysteria.

When all these measures fail, Lisfranc confidently recommends transcurrent cauterization of the abdomen. When we were blockaded in Metz, in 1813, he says, a young woman experienced, every two or three days, paroxysms of hysteria, which, after resisting the usual round of antiphlogistics, was perfectly cured by this operation.

It is of importance to ascertain the cause of the uterine irritation. Hysteria, it is well known, succeeds sometimes to the abuse and sometimes to the privation of sexual intercourse; these causes merit great attention. The treatment, in every case, should be continued with perseverance, as it has to act upon a disease which often proves obstinate; not only days but many months frequently pass before the confidence of the physician is verified by success. The course of treatment pursued by Pomme continued for years.

Hitherto we have spoken only of appropriate measures of attacking hysteria at its commencement and preventing its distressing paroxysms. Independently of this portion of the general treatment, there is another which is applied to the paroxysm itself, and which has undergone little variation, whatever the prevailing opinion about the nature of the disease might be. Among these remedial measures are sudden stimulants, such as cold effusions, vinegar, ether, ardent spirits, ammonia, &c., friction, rubefaction of the skin, irritating enemata, &c. On the authority of the aphorism of Hippocrates, *nubat illa et morbum effugiet*, the sexual congress has been recommended as a means of terminating the paroxysm. *Jussi ut rem*, says Duret, speaking of a husband, *cum uxore suâ haberet; rem habuit; indeque statim convaluit*. In the works of Sauvages we find an account of the following immoral practice among certain matrons; *Clitoridis titillatio, a barbitonsore impudico instituta, paroxysmum solvebat*. Although the two last mentioned remedial measures exert an influence over the disease simply by a shock communicated to the system, similar to that which is sought

for from the stimulants above enumerated, still physicians have been found, in small number it is true, who have dared to recommend them. Imminent danger and the failure of every other remedy could alone justify a course of which the immorality is so totally at variance with more modern ideas of rectitude. Finally, some writers recommend strong pressure with the hands upon the abdomen, in order to check the spasmodic movements of the uterus, and not, as was formerly the idea, to prevent its aberrations.

PART IV.

As this part will contain all that we have to say upon uterine affections properly so called, we shall treat in order; 1. of sub-inflammation unattended by any appreciable change in the structure of the uterus—of hysteralgia; 2. of engorgement; 3. of erythemata and eruptions, of solutions of continuity or ulceration, and of vegetations on the neck of the uterus; 4. of amputation of the neck and extirpation of the entire uterus; 5. of foreign bodies attached to the uterus or developed in its vicinity; 6. of the use of pessaries.

CHAPTER I.

SUB-INFLAMMATION UNATTENDED BY ENGORGEMENT OR ANY APPRECIABLE CHANGE IN THE STRUCTURE OF THE UTERUS—HYSTERALGIA.

THE physician is frequently called to women who are suffering from acute pains in the uterus. They complain of being greatly fatigued by standing, the

least exercise in walking, or riding in a carriage ; above all, sexual intercourse is extremely painful. They also suffer from a smarting, burning sensation in the pelvis, or, according to their own expressions, it seems to them as though there were a fire burning in the womb. The abdomen is somewhat tumid, and there is a sense of weight in the lumbar and iliac regions. Evacuation of the bowels is frequently accompanied by pain, in consequence of the expulsive effort which attends this act. It seems to these patients as if some foreign body were contained in the pelvis and forcing its way out ; nevertheless, there is neither prolapsus nor deviation of the uterus. The catamenia are perfectly regular ; there is no discharge of any other kind. The pains are sometimes remittent, but more frequently intermittent.

If a patient in this condition be examined by touch, in either of the three modes described, no discoverable change appears to have taken place either in the volume or consistency of the uterus ; but the cervix is a little more dilated than usual. The speculum does not show even an excoriation on the neck ; but the introduction of it, as well as of the finger, causes pain either immediately or shortly afterwards.

This affection is often regarded merely as a consequence of individual idiosyncrasy, and is pronounced purely nervous in its character. The treatment of it is either limited to palliatives or else is negative, and the disease progresses. But, even were it a simple nervous affection, is it the less necessary to attempt its cure ? Do we not frequently see vascular determination to an organ produced by nervous pains existing in it ?

Lisfranc regards this morbid state as sub-inflammation unaccompanied by engorgement, and immediately employs for its relief the antiphlogistic and narcotic remedies previously mentioned. But, if the disease has become chronic, it is necessary to apply cups and temporary blisters about the pelvis, and to administer douches, at first externally, and afterwards with the jet directed upon the cervix itself.

But even when the acuteness of the pain seems to require antiphlogistics, we must not trust, too implicitly, to their effect. Duparcque mentions a case in which a lady, twenty-eight years of age, was suddenly seized, four months after a favorable confinement, with uterine pains of such violence as to cause her to cry out and to throw her into a state of inexpressible anxiety. The symptoms subsided after several hours, but reappeared on the next and subsequent days at the same hour and with the same character. The first appearance of these pains coincided with the appearance of the catamenia, which had been retarded eight days. The flow, though scanty in the interval of the paroxysms, was more abundant while they were present and continued during the whole disease. The physician, who had attended her when confined, was called on the eighth day, and consequently at the time of the eighth paroxysm. He prescribed an antiphlogistic treatment, just as if he had to contend with an uterine phlegmasia ; but the paroxysms, instead of abating, were, occasionally, more than usually violent. Duparcque saw her on the twenty-fifth day. Although her appetite had continued good, he found her very much emaciated. During the paroxysm, the abdomen

was soft, flat, and not at all tender on pressure ; in the iliac and hypogastric regions only, pressure occasioned very slight pain. The neck of the uterus was somewhat tumid and a little open, as is usually the case during the catamenial flow. The uterus itself, when examined between the two touching fingers in the vagina, and the other hand placed upon the hypogastrium, was found to be in a normal state both as to volume and density. He, therefore, concluded that the disease was of a nervous character—a regular, periodic hystericalgia. He prescribed *eight grains of the sulphate of quinine* in four pills, to be taken in the morning before the paroxysm. The symptoms were remarkably modified on the first day, and completely removed on the next by another dose. Three doses only were administered.

In this case, certainly, neither the nature of the disease nor the efficacy of the remedy can be matter of doubt. Still, before we deny the efficacy of the previous antiphlogistics, we should wish the history of the case had contained a more particular account of the manner in which they were employed ; for in our opinion, and we have so stated in our general principles, it is not a matter of indifference whether local or general bleeding be resorted to ; moreover, the copiousness of the latter is sometimes sufficient to modify its effects.

The disease, under which this patient labored, was well marked congestion of the uterus. Fomentations, cataplasms, semi-baths, instead of resolving it, might have favored its continuance.

Madam N —, about thirty years of age, had been afflicted for eighteen months with uterine spasms.

They came on regularly every evening, and did not subside until very late at night. The disease was considered as sub-acute engorgement of the uterus. An antiphlogistic and revulsive course of treatment entirely failed. Narcotics, administered internally, by friction, and endermically, had no better effect than the sulphate of quinine, which was, however, given in too small doses — not more than five or six grains having been taken in the twenty-four hours. Finally, cold bathing proved ineffective; as did also two caustic issues, formed at the lower part of the loins. It may be remarked that, during all this time, the catamenia had suffered no derangement, although the patient was ultimately reduced to a very feeble state, which was protracted by the absolute repose to which she had been subjected. About fifteen months ago, the sudden death of a member of her family gave a shock to her feelings, which instantly terminated this distressing affection. I have seen her lately, and she has entirely recovered her health. Was this a case of real engorgement or of hystericalgia? The question scarcely admits of a doubt.

In similar cases, when no appreciable change in the uterus could be discovered, Jobert informs me, that he has put an end to these nervous pains, by slightly cauterizing the inferior extremity of the neck of the uterus.

In the cases just mentioned, the commencement of the symptoms coincided with a menstrual period; sometimes however it happens in the interval. In the latter case, the patients are, without any premonitory signs, suddenly seized with excruciating uterine spasms,

accompanied by a sensation as if an enormous weight were resting upon the rectum. These pains resemble those of parturition, but are much more severe. Occasionally, there is a slight discharge of blood ; after a longer or shorter duration, the paroxysm gradually subsides, and oftentimes never returns. It leaves behind it, however, an excessive weakness in the loins, and usually a sense of weight in the hypogastric region. I know a lady, about forty years of age, residing in St. Honoré street, who has been subject, once or twice annually for several years, to an attack of this kind. She derives relief from being bled the moment the symptoms make their appearance. At other times, she enjoys good health.

Miss —, twenty-seven years of age, was attended several years ago by Lisfranc for metro-peritonitis. From that time, her health continued good until eight months ago, when I was called to visit her. She then complained of pains in the loins and a sense of weight in the pelvis. These symptoms had followed a scanty menstrual flow. Four ounces of blood from the arm, injections, and some emollient enemata, restored her to her usual state of health. Two and a half months ago, and eight days after the menstrual period, which was nowise peculiar, she was seized, in the afternoon, with a paroxysm similar to that mentioned above. Having visited her three hours after the attack, I thought at first of taking blood from the arm ; but the patient, who is rather opinionated, and who usually has an extreme dislike to this operation, absolutely refused to submit to it, notwithstanding the entreaties of those about her. As I was acquainted with the previ-

ous state of her health, and knew that the present case was one of uterine neuralgia, I merely prescribed emollient injections, a small enema containing four drops of laudanum, and warm cataplasms to the hypogastrium. I thought this small dose of opiate sufficient; for she is one of those who are very easily affected by narcotics. At midnight, the paroxysm was at its height. The weight of the cataplasm had become intolerable; the enema, by distending the rectum and producing slight pressure upon the uterus, had occasioned pain, and been rejected. The state of the patient was as follows; face pale, pinched, and covered by a cold sweat; extremities cold; severe chills; respiration short and hurried; pulse small, hard, and frequent (120); nausea; epigastrium not in the least painful on pressure; hypogastrium extremely tender throughout; uterine spasms incessant. During my absence, she had twice fainted. It would have been easy to have mistaken the nature of this affection, and have pronounced it a case of severe metro-peritonitis; but the commencement and progress of the symptoms and the character of the pains confirmed me in my first opinion. I had observed nothing in the symptoms which was not perfectly similar to what I had witnessed in many other women under analogous circumstances. Bleeding was again proposed, and again rejected; her mind had conceived some gloomy impressions with respect to this operation, and she was convinced that it would, certainly, make her worse. Recollecting, then, the favorable effects of the liquid acetate of ammonia (page 178) in some cases of uterine pains occurring at the menstrual period, I prescribed forty drops of it, in a wine-glassful of sweetened water, and remained with her, in

order to apply leeches to the epigastrium if the pains continued. Hardly had she swallowed the dose, when the pains gradually subsided, and in half an hour became quite tolerable. I saw her again at six o'clock in the morning; she was pretty easy, and had slept two hours. The iliac regions were still rather tender on pressure, and there were yet occasional, momentary, darting pains through the uterus. I again prescribed fifty drops of the liq. acet. of ammonia, in a glass-ful of sweetened water, to be taken in three doses, with intervals of an hour. On my return at ten o'clock, I found her perfectly easy. She had had no return of her spasms, and merely felt very much exhausted. On the following day, she was covered with an eruption of urticaria, which was removed by a bath. Was this eruption occasioned by the acetate of ammonia? I simply state the fact, leaving its explanation to the reader. Since that time she has enjoyed her usual health. The patient, in the former of these two cases, was robust, of a sanguineous temperament, and very full figure; whereas, this latter is of a nervous temperament, and extremely delicate in health; the former has had three children, the latter is a maiden lady.

Finally, the pains sometimes remain after the organic affection of the uterus, in which they originated, has been removed. Duparcque reports a case of periodic hystericalgia — irregular at first, but afterwards regular and accompanied by symptoms of hysteria — which coincided with engorgement of the uterus. After the resolution of the engorgement by antiphlogistics, the nervous symptoms reappeared at the same periods as before; they were finally removed by Meglin's pills in large doses.

CHAPTER II.

ENGORGEMENT OF THE UTERUS.

I. SIMPLE HYPERTROPHY.

SIMPLE hypertrophy of the uterus may occasion all the general symptoms hitherto considered, even that fetid discharge which is regarded as the distinguishing characteristic of cancer. To verify the existence of hypertrophy, which is usually a state of sub-inflammation, other signs however are indispensable. These are afforded by the touch, performed either in one way separately, or in two simultaneously.

By this means, the internal surface of the vagina and of the neck of the uterus is found to be of an unusual heat. The uterus itself is almost always tender on pressure, and much more so than when in a scirrhus state. Whatever may be its volume, the sensation which it communicates to the finger is as though it contained an embryo of from four to six weeks' growth. Pregnancy, in fact, determines the fluids towards the uterus and occasions a physiological hypertrophy, which may guide us in ascertaining the existence of hypertrophy arising from pathological causes. The cervix, also, is in a state similar to that which it presents, in some cases, at the monthly period

of menstruation. The sensation communicated by the touch, in a case of this kind, may be compared to that which would arise from handling an undegenerated lipoma, or the breast of a young woman who had died suddenly, or, indeed, any slightly compressible, elastic, and spongy substance. By touching through the rectum, we feel the body of the uterus yield beneath the finger, as would a ball of cotton rolled moderately tight.

The orifice of the neck is commonly dilated, so that the end of the finger can easily be introduced into its interior. No feeling of crepitation is now perceived, as is the case when induration exists. With the speculum, the neck is seen partially obliterated and swollen, as it is during gestation. Its color is red, reddish brown, or even claret, every where uniformly diffused; sometimes however small spots of a deeper red are visible, giving to the surface of the cervix a dotted appearance.

Engorgement may exist upon the neck and body of the uterus at the same time; or one only of them may be affected; but it is never found upon either in detached points, so as to produce inequalities and knobs like scirrhus. Sometimes ulcerations exist upon the hypertrophied tissue, but they are not of a malignant character. The weight of the uterus is always augmented more or less according to its volume, which may be three or four times greater than is normal; or its increase may be so trifling as to be scarcely appreciable.

An important consideration now presents itself. The increased weight of the uterus fatigues and strains the

broad ligaments, which, being more or less affected by the disease, have become weakened; they are consequently less capable of supporting the augmented weight of the organ and of sustaining it in its normal situation. Hence it follows, that engorgement of the uterus of any kind is always accompanied by prolapsus of the organ, in a greater or less degree. The prolapse is the immediate consequence of the engorgement; the latter therefore should be the direct object of treatment. If this be removed, Lisfranc says, the uterus will, in the great majority of cases, either entirely or nearly return to its normal situation. This point deserves the greatest attention, because in common practice an opposite course is pursued; the treatment is applied directly to the prolapse, which is usually regarded as originating in weakness of the broad ligaments. We will not assert absolutely, that prolapsus uteri never exists without previous engorgement, but such cases must be very rare; for, among the great number of women who have been under our charge, we have never yet met with an instance of it.

Besides, we have already noticed the facility with which the uterus is displaced by a very slight impulse. It is, therefore, important to recommend to patients laboring under engorgement, that they abstain from straining at stool. Indeed, it is better to resort to enemata, because prolapse, brought on by expulsive efforts at this time, may persist simply from the influence of the pathological state of the uterus.

Simple hypertrophy of the uterus must not be confounded with another and essentially different state; we mean excessive ramollissement of the organ. In

this disease, its parenchyma yields beneath the finger like an atheromatous tumor or the sound skin of an apple decayed at its core. The tissue here is not spongy and elastic, feeling like a lipoma or a woman's breast, but gives the idea of something pultaceous, almost liquid. The tissues have become converted, beneath their investing membranes, into a kind of brownish-red putrilage. This state is sometimes accompanied with superficial ulceration; at other times there is no ulceration. This is latent cancer.

The diagnosis in this case, Lisfranc says, is exceedingly important. Simple hypertrophy requires no operation; whereas latent cancer, being rapid in its progress and fatal in its result, admits of no remedy except complete removal of the parts affected. To the distinctive characteristics already mentioned may be added the following; hypertrophy is usually recent in its origin, cancer has been of longer duration; the former occupies the neck, and frequently the entire uterus, whilst the latter continues for a long time confined to an isolated portion of the organ. We are, Lisfranc says, the more urgent with regard to this point of the pathology of the uterus, because we think it essentially new¹; and because it rests upon facts

¹ This is, undoubtedly, the same organic affection that Duparcque denominates *bleeding cancer*. "This cancer," he says, "is distinguished by swelling, without any change of form, of the uterus and especially of the cervix, in which it is usually seated; by remarkable softness of its tissue; decided crepitation on pressure; a constant discharge of black and grumous blood, mingled with coagula; and by the oozing out of a similar fluid from the whole of the visible, that is, vaginal surface of the tumor. In a very advanced stage of the disease, there are seen, mingled with the blood, putrified fragments and fetid matter, resulting from the

proved in this very amphitheatre, in which our audience have both seen and handled the morbid specimens, after amputation of the cervix which the existence of this disease rendered necessary.

Simple hypertrophy may or may not be attended with pain. This circumstance will be a leading indication in choosing the means of treatment. In the first case, the treatment should be that for sub-inflammation. Antiphlogistics must be immediately employed—such as absolute repose; emollient enemata, almost cold, to evacuate the intestinal canal; emollient injections at the same temperature; warm general bathing; and small revulsive bleedings from the arm. If however the patient is strong, plethoric, and there is any febrile reaction, it is best to commence by a depletive bleeding of eight or twelve ounces; and at the same time prescribe emollient drinks, &c., and especially repose of the diseased organs. The diet should consist of milk, vegetables, white meat, and fish—with due regard, however, in all cases, to the habits and temperament of each patient.

This treatment is simple, but it should be scrupulously and perseveringly observed. Diseases of the uterus require, for their cure, a longer time than do those of any other organ. In the first place, the treatment cannot be pursued during the seven or eight days which precede the catamenia, nor during their continu-

detritus and decomposition of the diseased tissue. This decomposition, like ramollissement, generally proceeds from the centre to the circumference; that is, it commences near the orifice and extends thence both to the cervix and body of the uterus. A kind of ulcerated excavation follows; and the disease now assumes the form of ulcerated cancer."

ance. Moreover, this congestion of monthly recurrence, although physiological in its nature, always exercises an unfavorable influence on the morbid and permanent congestion. We will remark, Lisfranc says, that the course which the pain observes must not be considered as a measure of the advance towards recovery; for we have noticed that, as the engorgement diminishes the pain increases.

In the second case, when hypertrophy exists without pain, and slight uneasiness and weight in the pelvis are the sole remaining symptoms, the disease is in its chronic stage. In this case also, we employ revulsive bleeding, cold baths if they can be borne, and ascending douches, at first simple, and afterwards medicated. A dozen or more leeches, applied to the cervix, will facilitate resolution. Moderate exercise, dry and scarified cupping, and douches around the pelvis, will be found useful. Sexual intercourse, in moderation, will contribute to dissipate the remains of the disease. Bitter drinks may be prescribed; but resolvents are not required, as no induration exists. If there is any suspicion of excoriations upon the cervix, the speculum may be safely used. The inflammation which exists is not sufficiently acute to contra-indicate its introduction, and cauterization would soon cause them, if found, to heal. Indeed, if the disease prove at all obstinate, it is prudent to ascertain by means of the speculum, whether its obstinacy may not be owing to the existence of excoriations.

In short, the treatment in the first case is wholly antiphlogistic; whereas, in the second it is stimulating and revulsive. The sole precaution needed is to keep

the stimulation within due bounds; otherwise the acute stage might be renewed and again require antiphlogistics.

CASE I. *Chronic inflammation of the uterus. — Hypertrophy of the inferior lip of the os tinæ. — Complete amenorrhœa. — Antiphlogistics. — Cure after five months' treatment.*

Mad. Leonora — an Italian actress — aged thirty-six — had menstruated regularly from the age of twelve years — had never had a child. In September 1830, she was attacked, at the very moment when the catamenial flow commenced, by violent pains in the loins and groins, for which she could assign no cause. She had committed no imprudence, and the weather was extremely pleasant. They were probably owing to the great agitation which she experienced, during the three days of July — the period of the catamenia. The catamenia occurred as usual; but, at every discharge of cannon, she suffered an inexpressible pain, which was felt in the loins and throughout the whole pelvis. When the pains occurred in Sept. she made use of a few simple remedies merely, of the kind commonly employed by women under similar circumstances, such as hot napkins, dry friction to the hypogastrium, and herb teas. The catamenia lasted five days, as did also the pains, the severity of which varied from time to time. It was the usual practice of this patient to take a warm bath as soon as her menstrual flow had stopped; but this time — although the water was only moderately warm — she could not remain in it, on account of an acute sensation of heat in the region of the uterus, which lasted several hours. However, she

regained pretty good health, which continued till the next menstrual period, when all the symptoms reappeared with increased intensity. Carron du Villards, who attended her, found on examination that the neck was not much tender on pressure, although considerably increased in volume; the touch produced a very painful sense of weight upon the rectum. As there were unequivocal symptoms of great congestion in the pelvis, the treatment was, *full bleeding from the arm—a quieting draught—and a small enema, containing six drops of Rousseau's laudanum.* In the following month, the catamenia were absent; and a doubt arises, whether to impute their derangement to the diseased state of the neck or to the blood-letting. The patient herself was of the latter opinion. Upon a renewed examination, the uterus was found to have prolapsed slightly; but no pain was occasioned by pushing it upwards. The os tincæ was less voluminous than before; the body of the uterus was healthy. By means of the speculum, the orifice of the uterus and the inferior lip were seen to be of a deeper red than normal. The patient refused to be bled again in the interval of her catamenia. *Warm baths—emollient injections.* Her regular menstrual period, (2d Nov.), arrived, but the catamenia, though announced by premonitory symptoms, did not make their appearance, notwithstanding the application of hot fomentations to the thighs. On the next day, *a revulsive bleeding, repeated fifteen days afterwards—warm baths—injections—perfect repose—diminished diet—abstinence from stimulating drinks.*

This treatment was continued till Jan. 7th, when

the catamenia occurred, moderate indeed in quantity, but without pain. On the 21st the neck had greatly diminished in volume, but was of a much deeper red; *venesection to* $\frac{3}{4}$ iv. — Feb. 4th. The catamenia occurred without pain, and more abundantly. From this date they occurred regularly. — May 9th. The neck upon examination was found to be in its normal state. Her health has since continued good.

CASE II. *Inflammation of the uterus, followed by amenorrhœa. — Death eleven years afterwards. — Occlusion of the neck. — Hypertrophy of the uterus. — Atrophy of the ovaries.*

Miss Dusemchet Caroline — aged thirty — first menstruation difficult. At the age of twenty-five, she was attacked by symptoms of acute metritis, the consequence of an unfortunate attachment in which she was opposed by her relatives. The disease was subdued by antiphlogistics, but the catamenia never again appeared. After all the usual remedies for amenorrhœa had been tried in vain, medical treatment was abandoned, and with the less reluctance, for the patient presented every sign of perfect health. Her sole ailment was some trifling disturbance of the digestive organs, which, however, had no effect upon the plumpness of her person. After the expiration of eleven years, she was attacked by an affection of the brain, which in four days proved fatal. At the autopsy, the hymen-membrane was found entire, but perforated, in its centre, with a hole barely large enough to admit a female catheter. The uterus was as voluminous as it is at the third month of gestation; its tissue was softened, but had not undergone any organic change, and

the ovaries were entirely atrophied. But the most remarkable circumstance was the complete obliteration of the entrance to the uterine cavity, at the junction of the cervix with the body of the uterus. The obstructing substance, from its perfect organization, doubtless had its origin as far back as the uterine inflammation previously mentioned, and probably occasioned the permanency of the amenorrhœa.

It is remarkable, that the secretion of menstrual fluid entirely ceased from the free surfaces of the interior of the neck and cavity of the uterus; and that atrophy of the ovaries should have coincided with the cessation of the menstrual *menstruum*.

II. HYPERTROPHY WITH SIMPLE, WHITE INDURATION, OR SIMPLE, WHITE ENGORGEMENT.

The induration, which characterizes simple, white engorgement, may be compared to that of chronic mammitis. Like simple hypertrophy, this kind of engorgement may occasion most of the general symptoms which have been particularized. It is, even, frequently attended by lancinating pains.

This induration is generally of recent date. Patients usually refer the commencement of their sufferings to their last child-birth, to an abortion, or sudden suppression of the catamenia, accidents which may have occurred within a month or two. The recent origin of this species of engorgement promises a speedy cure; but the particular importance of the fact is, that it serves to distinguish it from scirrhus, which is much slower in its progress.

On examination by touch, the volume of the uterus is found augmented, and sometimes very considerably so ; its tissue is hard ; but the surface of the organ is smooth and exhibits neither protuberances nor depressions. This last sign is a distinguishing characteristic ; for it is well known that scirrhus of the breast forms knobs, more or less distinct, upon the surface of this organ. Besides, in scirrhus, the mucous membrane of the neck is of a dull white color, which has never been observed by Lisfranc in simple, white engorgement. Finally, though the treatment is precisely the same, whether the induration be simple or scirrhus, the former is generally resolved without difficulty, in the course of a month or six weeks ; whereas the latter, if it be cured at all, requires a much longer time, even under the most appropriate treatment.¹

This disease of the uterus is often complicated with ulcers and even vegetations, not however of a malignant character. Besides, as respects the ulcers, the same effect takes place here, which is of daily observation in other parts of the body ; nothing is more common than ulcers of the legs accompanied with white induration. The vegetations, when any exist,

¹ It is a difficult point to ascertain when indurated engorgement is passing from a curable to an incurable state. The diagnosis, in this particular, can hardly be established except from circumstances as they occur. For instance, cure is possible as long as the induration is formed of a fibro-albuminous substance, deposited in the cellular membrane of the diseased organ. This deposition can be resolved ; but as it — like the false membranes formed in serous cavities, which differ from it only in the size of the lamina and in not being infiltrated as indurated engorgement — becomes cartilaginous and osseous, all chance of resolution is lost. (*Duparcque.*)

are not soft and spongy, nor is the fluid, which can be forced from them by pressure, abundant and of an ichorous, fetid nature. The matter, secreted by the surface of the ulcers, is also of good quality.

White engorgement, as has been observed, yields pretty readily to appropriate treatment. But, although nature in some cases effects its cure, there is reason to fear that, if left to itself, it will degenerate into scirrhus, with its characteristic symptoms and progress.

The treatment for this and the preceding affection is precisely the same, except that, in the chronic stage of the former, discutient frictions, and even resolvents either externally or internally, are of great importance. The latter are especially beneficial, because white engorgement usually has less sympathetic reaction upon the digestive organs. Sulphurous baths, and sulphurous, ascending douches, directed upon the cervix itself and around the pelvis, are very useful. Finally, if the disease prove obstinate, it is necessary to create active and constant revulsion by cauteries, moxas, or a seton, placed according to the preceding directions.

III. SCIRRHOUS ENGORGEMENT.

Scirrhus engorgement has the same causes and same general symptoms as those of the preceding engorgements. Lancinating pains, however, are more severe and more frequent in this, than they are in the other species; but, as they frequently exist unaccompanied by scirrhus degeneration, they are not

to be regarded as an essential characteristic of the disease.

In scirrhus hypertrophy, the tumor is of longer standing than the preceding diseases, is of a stony hardness, irregular and knobbed. With the speculum, the cervix is seen to be of a dull white, slightly tarnished, exactly like the color of ivory which has turned a little yellow. Moreover, when subjected to the same treatment, it is much more obstinate, and perhaps proves wholly intractable.

The treatment is precisely similar to that of the preceding diseases. In scirrhus engorgement, however, more than special attention must be paid to the degree of inflammation. It is easy to perceive how rapidly degeneration would ensue, if the inflammation, or the activity of the morbid processes, if this latter form of expression be preferred, were increased by inappropriate treatment. The chronic stage should be combated by resolvents and stimulants, proceeding gradually from the milder to the more energetic. Of the latter, compression is one of the most active; but it should be employed with great caution, otherwise it will occasion ulcers of very difficult cure. The treatment must be continued a long time, for a cure is effected slowly, on account of the long standing and advanced stage of the disorganization. We must remember to economize the patient's strength, in proportion to the anticipated duration of the treatment.

It is still a matter of dispute, whether scirrhus can really be cured. I myself, Lisfranc says, have not the slightest doubt upon the subject. Tumors of the breast, and lymphatic ganglia, with all the characters

of scirrhus, are very frequently resolved and cured. But cures of the same disease, in the uterus, are still more frequent.

Marc-Antoine Petit, of Lyons, observes that cancers in the breast, the primary cause of which was a contusion or lacteal engorgement, are radically cured, without an operation; and this remark is as old as Galen and even Hippocrates. Fearon in England, Hufeland in Germany, and Le Dran, Vacher, Poiteau, and others in France, have obtained similar results. I have resolved engorgements of the breast, Lisfranc continues, which I regarded as scirrhus. But were they really scirrhus? To answer this question positively, an examination of the morbid specimen after its removal would have been necessary; but, as the cure was effected without an operation, this was impossible. I can assert, however, that these engorgements had all the characteristics, which, in the opinion of others, indicate the necessity of an operation. On the whole, I think that scirrhus is susceptible of resolution.

We certainly ought not to denominate, as scirrhus, every hard and knotted tumor which occasions pain only by its pressure or traction upon the adjacent parts. Similar indurations and inequalities, accompanied even by vegetations and tubercles, are indeed occasionally seen in some kinds of ulcers on the legs of old men; yet there is nothing cancerous in their nature. Why may it not be so with the uterus? For a long time, Lisfranc says, I shared the common error on this point; experience alone has undeceived me. Six years ago, I pronounced incurable two women having an affection of the uterus which exhibited all the above mentioned

characteristics. They were perfectly cured, and at the present time are in excellent health; and, what is more remarkable, nature alone effected the cure.

IV. TUBERCULOUS INDURATION.

This disease is observed, more especially, in women of scrofulous constitution. By passing the finger along the neck of the uterus, we perceive occasional hard elevations, with intervening depressions of normal consistency. In a word, the parenchyma of the neck, though in a healthy condition generally, presents several perfectly isolated points of induration. In other cases, the intervals between the prominences are in a state of simple hypertrophy, induced, without doubt, by the presence of tuberculous matter. These hard points, in general, soon open, and discharge a sero-caseous matter. The little apertures, thus formed, continue to furnish a purulent discharge of the same quality; they gradually enlarge, and then constitute scrofulous ulcers, of which we shall presently speak. At other times, the tumors soften and, on being touched, feel as though partial degeneration of their tissue had taken place.

Before tuberculous engorgement opens externally, it is utterly impossible to diagnosticate its character with any degree of certainty. All that can be done is to form a rational conjecture, from the constitution of the patient. But, when once open, error is more easily avoided. By pressing the extremity of the speculum against the cervix, a quantity of matter, of a purely tuberculous nature, is seen to discharge itself through one or more openings.

This disease is not, in itself, attended by much danger. Many cases, in which the cervix was hollowed out by tuberculous cavities, have been cured by the restorative powers of nature alone. A long time, however, is required for its cure, more especially as it is quite common to see new tuberculous cavities successively form, as the preceding ones become cured. Moreover, this disease generally passes into a state of scrofulous ulceration, and is then subject to the chances of this new state.

The treatment is, in a degree, similar to that for hypertrophy unattended by structural degeneration. When inflammation exists, it is to be subdued by antiphlogistics, employed, however, with moderation and with reference to the defective constitution of the patient. Resolvents and, especially, appropriate tonics are suited to the disease in its chronic stage.

V. DIAGNOSIS OF ENGORGEMENT.

Before quitting the subject of engorgements, we take the liberty to detain the reader by a few reflections, for the sole purpose of cautioning him against errors of diagnosis, which may frequently lead to serious consequences. Some few practitioners have so abused the term engorgement, and the idea of this disease has become so predominant in their minds, that they cannot examine a woman by touch without declaring her affected with it. It is probable, indeed, that habit leads them to believe that such is the case; and we would rather impute this belief to preconceived opin-

ions, than to their incapability of diagnosis. No one, it is true, is exempt from this error; but we ought to suppose it more rare among practitioners of acknowledged superiority.

The most common symptoms of engorgement of the uterus, whatever may be its special nature, depend, undoubtedly, upon augmentation of its volume and consequently of its weight, connected perhaps with an antecedent or consequent weakness in the suspensory ligaments. These symptoms are sometimes a painful numbness; sometimes dragging pains in the loins and, quite frequently, in the groins; and a sense of weight in the pelvis and upon the rectum. It often seems as if some foreign body were pressing downwards with a tendency to emerge, and as though, in the language of patients, *it would split their bodies open*. Now should these symptoms, when not continuous, be uniformly attributed to engorgement of the uterus? The exceptions are in our opinion numerous.

There are some women, especially those accustomed to much standing, who are very well in the morning and during a part of the day, but who, towards evening, exhibit all the symptoms we have mentioned. On going to bed, their sufferings immediately cease, but recur on the next and subsequent days in precisely the same form.

When examined by touch, in the morning, the neck is found high up and somewhat short; at evening, the uterus has descended, and the cervix — merely because a greater portion of its extent is exposed to the finger — appears much longer. As the finger now comes immediately upon the body of the uterus, the practitioner

might easily believe in the existence of engorgement, if he limited himself to this simple examination. The danger of error is greater from the fact that, in many cases, real engorgement is not painful on pressure, and that neither the volume nor consistency of the uterus is the same in different individuals, and even varies at different periods of the same individual's life. In the cases we have just mentioned, the difficulty arises from fatigue and elongation of the suspensory ligaments, occasioned by excessive exertion, or weakness of the ligaments themselves. This weakness may be a consequence of transient congestion, but it more frequently arises from a feeble or impaired constitution. It is possible that this predisposition may ultimately terminate in some pathological change; but none exists primarily; and the treatment, under such circumstances, should consist in limiting the quantity of exercise, and removing the general or constitutional cause from which the symptoms originate. One should not, therefore, be too hasty in his diagnosis, and, by improper treatment, run the risk of destroying his patient's constitution. We would remark, moreover, that the touch may also lead one to err in cases, in which the uterus is naturally low.

But, in cases of pregnancy particularly, errors in diagnosis may produce evil consequences. This is an error to which there is great liability, if we may judge by the mistakes of some surgeons, whose extensive practice has not prevented their falling into it. I might adduce, in support of this assertion, the case of Mad. de Tul and that of Mad. Court who were both treated for engorgement of the uterus, until

the fifth month of gestation. So great, indeed, was the confidence of the medical attendant in one of these cases, that he attributed the first movements of the child to nervous contractions of the uterus, instead of investigating their true cause. The former was delivered of a boy, at term; the latter has now reached her eighth month. Mad. Menz was also treated for engorgement, until an advanced period of gestation, and was delivered some months afterwards. In neither of these three cases was the progress of gestation disturbed by the treatment for engorgement, but such is not always the result.

A girl, after similar treatment for more than three months, aborted at four and a half months.

A woman, St. Eloy street, who had had several children, was treated for engorgement, first at her own house, and afterwards at the hospital, where she died in the seventh month of gestation. The autopsy showed that the fœtus must have been dead three or four months.

Mad. Fre had pain in the loins, occasional headache, and a rather profuse discharge from the vagina. There was nothing peculiar about the pain. Her physician, having made an examination by touch at several different times, endeavored to convince her, until the expiration of the fourth month of gestation, that she had an engorgement of the uterus; and yet, with the exception of the trifling ailments just mentioned, she enjoyed excellent health. She had had two children; and the cessation of her catamenia had coincided with the commencement of pregnancy. She was, therefore, almost certain of her real condition,

although her confidence was somewhat shaken by the contrary opinion of her physician. This belief, however, saved her from being subjected to absolute repose, small revulsive bleedings, injections, and the whole routine of remedies for uterine engorgement. She was delivered some months afterwards.

All these facts, except the case in St. Eloy street, are recent, and I have selected them in order to show that the improvements in this branch of the healing art are no guarantee against error.

The commencement of pregnancy frequently occasions the symptoms which we have ascribed to engorgement, and the practitioner may naturally be for a time in doubt; but that he should persist in his error three, four, or five months, may very reasonably be imputed to superficial examination of the affected organs. It is true that the signs of gestation, as laid down by accoucheurs, are very uncertain when considered individually, but, taken collectively, they ought at least to excite doubt and induce a course of rational expectation. I shall make myself better understood by an example. The latter part of June, I was called to visit, in consultation, Mad. S. She had been delivered, for the second time, ten months before. Since then the catamenia had not reappeared. No severe symptoms or pains, however, occurred to indicate the period when this discharge ought naturally to take place. She merely complained of weight in the region of the loins, dragging pains in the groins, and a pretty profuse vaginal discharge. She remained a month at *La Pitié*, under the care of Lisfranc, without any benefit. Soon after she left the hospital — which

was five months ago — the symptoms became worse, and she was carried to the *Beaujon*. Here she was treated for an affection of the uterus; *venesection*, *twice* — *cauterization*, *once a week* — *a general bath daily*; no relief. About the last of May, her pains became so severe, that the surgeon, who temporarily had charge of Blandin's service, proposed an operation, which Marjolin thought unnecessary. This, at least, is what the patient and her husband stated both to me and to her regular physician. From these few details, and especially from the patient's condition, I cannot imagine what operation could have been proposed; I therefore discredit her assertion. However, the fear of this pretended operation induced the husband to take his wife home. Here, Canquoin made her three visits; and took from her twelve ounces of blood, but without any good effect. In short — being called in, as I have said, by her last physician — I found her in bed, and taking preparations of iron in pills, with the object of reëstablishing the catamenia, at all events, as the only means of restoring health. The patient — who was twenty-nine years of age, and pretty robust, though somewhat lymphatic — had retained a considerable degree of plumpness, and there was scarcely any perceptible change in her countenance. She complained of occasional and slight, darting pains in the pelvis, extending sometimes to the thighs, particularly of the right side; of dragging pains in the groins, and excruciating pains in the loins, so much so as to render standing and more especially walking impossible; when in an upright position, she felt a sensation as of laceration. Even the act of blowing her nose, or

slightly coughing, aggravated her sufferings. The discharge was quite profuse and cream-like; not in the least viscous or limpid, like that which usually comes from the cavity of the uterus. She passed quiet nights; her digestion, which at first had been disordered, was now good, although the appetite was small. She had been under the care of so many surgeons, and gave so animated an account of the severity and obstinacy of her pains in spite of the remedies used, that, I confess, I was staggered for a moment, and proceeded with great caution in my examination of the sexual organs. The vagina, as also the vulva, were in a normal state. The cervix — except a small, hard point, as large as a hemp-seed, towards the right commissure of the os tincæ — appeared rather soft and compressible every where, without any trace of hardness; it was small, pointed, entirely closed, short, scarcely six lines in length, and expanded immediately into a segment of the body of the uterus, the breadth of which seemingly indicated great volume of the organ. That portion of the body of the uterus, which was accessible to the finger, readily yielded to gentle pressure; not the least sign of induration was discoverable. I was immediately led to suspect the possibility of pregnancy; placing my left hand upon the hypogastrium, I there felt the fundus of the uterus rising above the pubis, and, as well as I could judge through the abdominal wall, not feeling like an indurated body. I tried to obtain ballottement, but the sensation was so obscure, that I abandoned it. The breasts were enlarged, and were affected by occasional darting pains. On inquiring whether, in previous

pregnancies, she had felt any thing similar to what she now experienced, she said, *no*, but that, in April and May, she had had *longings*. Finally, I told her and her husband—who were the more anxious with regard to my answer, on account of my very careful examination—that I believed her to be pregnant. To this opinion, which was quite unexpected, some objections were raised—the opinions of her previous physicians, the non-appearance of the catamenia; indeed, the possibility of such an event was denied. As, however, I felt myself wholly unable, especially from the signs derived from touch, to determine what could be the nature of the pathological alteration in the uterus, on the supposition that pregnancy did not exist, I thought it best to adhere to my opinion, with the proviso that I might modify or confirm it by repeating my examination a few days later.

In the mean time, it was necessary to relieve the patient's most urgent symptoms. I had, for some time, been using the *secale cornutum* with admirable effects in engorgement of the uterus; and the cessation, or at least the gradual diminution of the dragging pains in the loins, which in this disease are almost incessant, was the most striking of its effects. I therefore prescribed *three grains* of it, with a sixth of a grain of extract of opium, to be taken in the evening at a single dose. If pregnancy actually existed, this quantity was too small to disturb its progress. I charged her, besides, to discontinue its use, if she felt the least pain in the uterus. Having observed, with the speculum, a small transverse fissure, about a line in breadth, in the centre of the point previously mentioned, I slightly

touched it with the protonitrate acid of mercury. *Cooling drinks — emollient injections, nearly cold — enemata.*

Seven days afterwards, I saw her again. For two days she had been entirely free from pain; and she even thought she had perceived a kind of slight murmur in the uterus. A new examination, aided by mediate auscultation, confirmed my previous diagnosis. *Continue ergot — cauterization.* The thirteenth day, she breathed with some difficulty; her face was red, flushed; a sense of fulness in the head; pulse full (80); *Venesection to § viii. — discontinue ergot.* From this time, the movements of the child were quite distinct, and the patient left her bed. She was able to pursue her usual occupations until Nov., when she was delivered of a healthy boy. In the interval, however, she resumed the dose, three grains, of ergot, as there was a slight return of pain in the loins. The probability is, that this patient conceived after leaving *La Pitié*; the child, although healthy, appeared to have been born before term.

Now here was a case in which pregnancy was considerably advanced; I can therefore readily believe that, at its commencement, its diagnosis must have been very difficult, especially as the preceding state of the patient was very likely to lead one into error. However, I was induced to think her pregnant, from the following considerations. If the body of the uterus were so much enlarged in consequence of its pathological state, it would have been very extraordinary to have found the cervix in a normal condition, as it is ordinarily, in such cases, partially open; the finger

can frequently pass through it even into the cavity of the uterus ; it is flattened ; its walls are hard ; and it participates, more or less, in the developement of the body of the organ, in which it is imperceptibly lost. In this case, on the other hand, it was small, and implanted, like a nipple, upon a voluminous sphere. . . . But suppose a healthy state of the cervix possible under such circumstances ; an engorgement of the body of the uterus, of this developement, would have exhibited an evident and, as it were, doughy hardness, or some other peculiarity in the consistency of its tissue. By passing the finger along the neck to the body of the uterus, some difference in the nature of the tissues would have been easily perceived, whereas I fully ascertained the existence every where of a normal consistency.

The cervix, indeed, frequently appears to be partly open even during pregnancy ; but in reality it is not so. The finger, when inserted into its orifice, can penetrate only a few lines, the passage being closed at its superior extremity. This opening of the inferior part of the neck rarely occurs except after one or more child-births, and seems to arise from the existence, at the border of the lips of the os tinea, of a small, indurated, and almost cartilaginous ring, or of isolated cones, equally hard and unyielding, which give an irregular form to the inferior part of the organ. In short, when engorgement exists in the body of the uterus, the neck is more or less modified by it, either in consistency or in volume, and especially in the disposition of its orifice, which is usually enough open to admit the extremity of the finger ; whereas, in the

early part of gestation, the developement of the neck does not keep pace with that of the body of the organ, and in many cases — in direct contrast to the anormal volume of the body — it rather seems to be contracted at its insertion.

In the present case, the breasts were firm and enlarged; the reverse would have happened had there existed a pathological affection. At the commencement of uterine disease, these organs are sometimes painful, and may exhibit a slight increase in volume; but the latter phenomenon is more rare, and only of brief duration; after an interval, which is ordinarily short, they shrink.

Engorgement of the uterus is, from its very commencement, attended by loss of appetite and spasms of the stomach; but, in the great number of cases, which have come under my observation, I have never known vomiting to occur, except at an advanced stage of the disease. Disrelish for certain kinds of food, and craving for improper substances, so common during gestation, are scarcely ever observed except in chlorosis, and, then, very rarely at the commencement of the disease.

With many women, the course of the catamenia is an almost infallible guide. When not so, it is important to ascertain whether their retardation or suspension has taken place subsequent to the possible cause of pregnancy, or whether it can be ascribed to any accident. Menstruation may continue to an advanced stage of gestation, as was the case with the woman in St. Eloy street. This circumstance is not very embarrassing, except during a first pregnancy; in succeeding

pregnancies, a knowledge of it removes all difficulty. The last mentioned patient had previously been pregnant three times, and, each time, had exhibited the same peculiarity. Finally, at the time of conception, a woman may be affected with amenorrhœa, as in the case of Mad. Salvatelli. This is an extremely rare occurrence, but there are probably similar cases on record.

The sign derived from menstruation, in such a case, is certainly calculated to deceive, but that is no reason why we should give blindly into the error. I repeat that, in the diagnosis of pregnancy, individual signs, by themselves, are of very little value; no degree of certainty can be attained except from all its characteristics taken collectively.

I am far from presuming that I have thrown any light upon this obscure point of the medical art. My design will be fully accomplished, if I can impress my readers with a sense of the importance of the question. Here we should apply the philosophical axiom, *in doubt, forbear*. As long as the situation of the patient is a matter of uncertainty, the danger is very rarely imminent; prudence, then, recommends an expectant course of treatment. Let the young practitioner reflect, that an error in diagnosis will sometimes blast forever his hopes of success, whatever may be his merit; and that it is unimportant to those only who enjoy the rare privilege and the protection of a distinguished reputation.

Finally, a physician may be called to examine a woman shortly after parturition, without being informed of this anterior circumstance. The successive

changes, through which the uterus must pass, in returning to its physiological volume and consistency, after being freed from the products of conception, are known; the practitioner, therefore, being aware of the possible existence of this state of transition, should be cautious of pronouncing a hasty decision. A distinguished surgeon, having touched a woman twenty-six years of age, delivered a very alarming prognosis; asserted, indeed, that, if she neglected herself two months longer, it would be necessary to resort to extreme measures to save her life. He had lately amputated the neck of the uterus of her eldest sister; and this prognosis completed the alarm of the family. From that time, if she felt the least indisposition, it was ascribed to disease of the cervix, which must unavoidably be ulcerated, because a distinguished surgeon had said so. With much difficulty I undeceived the family, by demonstrating the error into which he had unconsciously fallen.

Twenty-four days previous to the examination, this lady, who had already borne four children, was delivered of a pair of twins. The surgeon had not the least suspicion of this previous circumstance. The symptoms, which induced the family to consult him, arose merely from fatigue, occasioned by the patient's attendance upon her eldest sister. Repose, depletion, and a few baths removed the disease; and the neck of the uterus returned to its normal state.

CHAPTER III.

ERYTHEMATA AND ERUPTIONS, ULCERS AND VEGETATIONS ON THE NECK OF THE UTERUS.

I. ERYTHEMATA AND ERUPTIONS.

ALMOST all women, subject to profuse leucorrhœa, have, upon the posterior lip of the os tincæ, a redness which appears to be occasioned by contact with the secretions from the uterus; just as, in epiphora, the tears produce redness and even excoriation of the skin of the cheeks. The erythematous spots are not, in themselves, of any great importance; but, if the catarrh which occasions them be not removed, the structure of the mucous membrane may eventually become diseased. There are others, however, which are wholly independent of this cause; they affect a part or the whole of the cervix, unaccompanied by any change in the natural color of the vagina. The erythema is distributed in patches, perfectly analogous to those found in the intestinal canal after death from enteritis. When the erythema is partial, the patches are sometimes isolated and sometimes confluent; their color terminates abruptly and does not shade off into that of the surrounding parts. Their aspect is similar to that

of the erythemata which occur on the legs of young girls, uncleanly in their persons, irregular in their menses, and somewhat scrofulous in constitution; or, a better comparison still, to those herpetic red spots which are sometimes seen on the face. They are of a reddish brown, indicating inflammation; rise a little above the surrounding healthy surface of the neck; and, when isolated, are sometimes as distinctly circumscribed as if they had been made with a punch. In some cases, they appear to be composed of a net-work of minute vessels, in relief, as is seen in inflammation of the pharynx. They are always attended by simple engorgement, very rarely by induration of the neck, and, to the touch, the mucous membrane generally feels soft, thickened, villous, and bleeds with great readiness.

At other times, the cervix, instead of being covered with patches of various sizes, is dotted with small, very distinct, red points, which resemble flea-bites, and give its surface an appearance somewhat resembling the back of a salmon-trout.

In some instances, small miliary vesicles are to be seen on the reddened cervix; they are either discrete or confluent; they may be limited to a portion or occupy the whole of its surface. Sometimes, there are very numerous small pimples, similar to those of scabies, and having a limpid apex; in some cases, a single vesicle is seen in the centre of a little red patch resembling those previously mentioned. Again, we find large vesicles, real phlyctenæ, more or less numerous, such as are observed upon the skin, and exactly resembling aphthæ. These latter have never been found by Lisfranc upon the walls of the vagina.

The miliary and phlyctenoid eruptions may disappear without any solution of continuity; but this termination is very rare, especially with the latter. The vesicles generally break and leave small, superficial ulcers, which, by their union, form excoriated patches of considerable extent.

Erythemata may very justly be considered as a very frequent cause of ulceration, if, as is proved by observation, it commences almost uniformly on the posterior lip of the os tincæ. They require, therefore, the greatest attention from the physician, because the constant irritation, kept up by them, favors engorgement of the uterus. Besides, although very simple at first, they may, by ulcerating, assume a very serious character; and, from neglect of them, the life of many a patient has been put in danger.

It is very important not to confound these red patches with superficial ulcers, especially when these latter are seated upon the cicatrix caused by amputation of the cervix.

By looking across them obliquely, we often see that the epithelium is destroyed, leaving exposed a granular tissue covered with small excoriations, such as are sometimes found on the cornea, when examined in a similar manner. The diagnosis may be confirmed by making slight friction with a little mop of lint; if it be an excoriation, it is instantly covered with blood. If these diseases are attended with smarting, heat, and pain in the pelvis, we resort to antiphlogistics and emollients, general bathing, injections, enemata, and emollient drinks. If the pains are very acute, narcotics and small revulsive bleedings from the arm will be found

beneficial. When this train of irritative symptoms is removed, the red patches or little vesicles, likewise, occasionally disappear of themselves; but the least walking, coition, or the use of stimulants, will frequently bring back the acute stage, with all its phenomena. We should not therefore flatter ourselves, because the disease has assumed a chronic character, that its cure is completed.

In the chronic stage, antiphlogistics are no longer proper. Astringent applications to the disease itself should be resorted to. The manner of using them is not, however, a matter of indifference. Some practitioners introduce daily, by means of the speculum, a pledget of lint saturated with a suitable wash. This mode of application is a potent source of irritation, and we have already expressed our disapprobation of it. Injections are exceptionable, but in another point of view. When very energetic, they irritate and may inflame the mucous membrane of the vagina; when weaker, their action upon the neck is too feeble, and insufficient to remove the disease. The best method, and that which often succeeds on the first application, is slight cauterization with proto-nitrate acid of mercury. The surface should previously be wiped with a very soft swab, in order to remove the mucous matter, which would prevent the action of the caustic. The parts are then to be very lightly touched, just enough to whiten the surface of the patches. At the expiration of eight days, the speculum is again introduced; frequently, the eruptions or erythemata will now be found to have disappeared; otherwise, the acid should be again applied. These affections almost always yield in a very short time.

If however the disease occupies the whole neck, we must beware of cauterizing its entire surface at one application. The excessive excitement, thus produced, might be followed by serious consequences. The surface, touched by the caustic at any one time, should not be larger than a ten-cent-piece. This partial excitement is often sufficient to remove the disease in its whole extent; if not, a second cauterization is made upon points not touched the first time.

If the disease be supposed to originate in an herpetic taint, it should be treated accordingly. Some practitioners, says Lisfranc, cannot look at disease without seeing in it repelled herpes; but, for ourselves, we do not believe that a cutaneous eruption of this kind can be thus suddenly transferred from the cheek, for example, to the neck of the uterus. We should, undoubtedly, be of a different opinion, if the herpetic patch occupied the edge of the vulva, and, more especially, if it affected a serpentine course. Except in the latter case, we never take the herpetic origin of these diseases into consideration; the simple treatment, just prescribed, has never disappointed our expectations.

Cauterization, and Directions for its employment.

Erythemata and eruptions on the neck of the uterus yield with remarkable readiness, as has just been stated, to the action of caustic. Cauterization is, also, the best treatment for simple ulcers in the same place; we shall presently speak of them. But, to insure success, certain conditions are necessary; they form the subject of this article, and we place them here, so as not to interfere with what we have to say on uterine ulcers in general.

1. — Lisfranc defers cauterization, if partial or general engorgement exists to such an extent as to double the volume of the part. We have a great many times, he says, seen the opposite course pursued, and it has almost invariably been followed by metritis or metro-peritonitis; death has sometimes ensued; and hence some physicians have concluded to reject a remedy which their inexperience alone rendered dangerous. In very favorable cases, indeed, cauterization has arrested degeneration of the organ. Hence the first rule for cauterization — moderate engorgement permits it; voluminous engorgement contra-indicates it. In the latter case, then, the first thing to be attended to is the engorgement. If, however, the superficial ulceration should increase in despite of the general treatment, cauterization may then, but cautiously, be tried, and suspended at the least indication of the serious consequences just mentioned.

2. — Inflammation of the vagina or cervix, and even acute pain, are another contra-indication.¹

¹ The principle of not cauterizing so long as inflammation or severe pain of the cervix exists is entirely opposed to general observation, and often fatal in its consequences. Still further, I do not hesitate to assert that, if symptoms of metro-peritonitis do not actually exist, or have not recently existed, pain more or less severe and local inflammation do not absolutely forbid the application of caustic to ulcers of the cervix; and that cauterization is frequently the best means of easing the pain and subduing the inflammation. Indeed, the pain of ulceration contributes, in its turn, to create and sustain inflammation. A slight application of caustic frequently puts an end to both these phenomena.

In fact, antiphlogistics are of no avail against the inflammation, which is frequently merely the consequence of irritability arising from the process of ulceration; and the ulcers spread with a rapidity proportioned to the intensity of the inflammation, if the irritability, which is the main source of all the disturbance, be not previously destroyed. In this way,

3. — Cauterization should not be performed within four or five days preceding the catamenia, during their continuance, nor until three or four days after their cessation, that artificial may not be added to the morbid excitement already existing in the uterus.

a simple case is converted into a very serious affection, and many an unhappy woman has been reduced to undergo an operation, the melancholy results of which will be, hereafter, stated. Of this class is the following

CASE — Marie Noiret — 29 years of age. — Since her last child-birth, three years ago, catamenia have been irregular. She has had a sensation of smarting in the neck of the uterus, and suffered much pain during and after conjugal relations. There has been a profuse discharge from the vagina; almost constant pain in the uterus; and dragging pains in the loins and thighs. After much ineffectual treatment, she entered *La Pitié*, service of Lisfranc, 23 Oct. 1828. By the speculum, the cervix was seen quite red, and, on the posterior lip especially, were many rounded ulcers — V. S. to viii. ounces — *injections* — *cataplasms with the decoction of belladonna*. Nov. 10. — Eight leeches to thighs to recall catamenia, which ceased almost immediately after their appearance. The leech-bites bled freely. 12. — Pains somewhat diminished — *injections*. 15. — Pains in uterus more severe — V. S. — *inj.* — 20. — Cervix less red — ulcers stationary — *Cont.* 28. — Pains more than usually acute; no sleep — V. S. — *inj.* — *a small enema with five drops of laudanum, and three grains of camphor beaten up with the yolk of an egg*. Jan. 9. — Anterior lip less red — ulcers of the posterior lip smaller — pains diminished — discharge less profuse — *inj.* — *enem. ut supra.* — Feb. 13. — Pains more severe than ever; no case — V. S. — *inj.* — 27. — Cervix very much swollen — ulcers larger, many having united — posterior lip softened. Lisfranc now declares that the patient's sole hope is in excision of the cervix. The disease continued to advance till the 25th March, when the operation was performed.

In this case certainly, if ever, the inflammation would have yielded to antiphlogistics, had it not been supported by a cause, which a slight cauterization, by modifying the vitality of the ulcers, would have destroyed. It is familiar to every one, that the sharp pain of *ulcuscula oris* and the inflammatory circle around them are removed by a single application of caustic. Venesection might afterwards have been employed with more certain effects, when the cause of the symptoms had been removed or modified.

The manner of applying the caustic is of great importance. For a long time cauterization has been brought into question, by imprudent modes of application. Some physicians, for instance, apply to the neck of the uterus pledgets wet with nitrate acid of mercury, and keep them in contact for ten minutes; others use cones of caustic potash. But under such circumstances, how can the action of the caustic be limited at pleasure? What can be expected from so irrational modes of procedure, but the usual consequences, dangerous and even fatal inflammation, perforation, and obliteration of the vagina? The principle established by Alibert for cauterizing herpes exedens (lupus) has been applied to ulcers of the neck of the uterus; to cauterize superficially, and much less with the design of destroying the tissues than of modifying its vitality. Thus in a multitude of cases at *La Pitié*, even partial cauterization has been known to modify the entire surface of external ulcers. The following is the mode of procedure.

Introduce the speculum so as to expose the neck; wipe away the mucous matter with a soft mop, usually made of strips of lint tied around the end of a small rod. If the ulcers bleed, inject cold water and wait a while until the blood ceases to flow; if that is not sufficient, cauterize the bleeding surface. The caustic, in this case, produces two effects; first it coagulates the blood upon the surface of the ulcer; and then stops its effusion, either from mechanical obstruction by the coagulum, or rather, perhaps, by constricting the capillaries from which it took place. After the bleeding ceases, remove the coagulum which covers the ulcers,

so that the caustic may act directly upon them. For this purpose use a small and very fine pencil, like those employed by miniature painters; squeeze from it the superfluous acid; then, after having touched the ulcers, pour cold water into the speculum—to arrest the action of the caustic and prevent it from spreading beyond the diseased surfaces. Continue this lotion for a moment; at the expiration of a minute, the speculum may be withdrawn. When a syringe is used to throw in water, care must be taken not to direct the jet upon the cervix; for, although this organ is insensible to an incision, it is, on the other hand, very sensitive to a blow, and such is the action of a jet of liquid.

Lisfranc regards the proto-nitrate acid of mercury as the very best caustic in these diseases. After a great many trials, he has found that the use of it has been attended with better success than that of any other. He greatly prefers it to the nitrate of silver, because this latter brings on the catamenia too frequently. It is impossible to account for this fact.¹

The consequences of cauterization are different in different individuals. Ordinarily, it is not even felt; in some cases, on the other hand, it occasions very

¹ In some cases, cauterization with proto-nitrate acid of mercury is followed by salivation, especially when the patient is weak.

Dr. Canquoin has lately extolled the chloride of zinc, as having the advantage of causing a dry slough. With two, three, or four parts of flour, he forms a paste, which continues soft and plastic, and the thickness of which is proportioned to the intended depth of the slough. If he does not wish to destroy but only to modify the ulcers by slight cauterization, he mixes a drachm of the chloride with an ounce of nitric acid. The application of this latter is less painful than that of the others.

acute pain. Frequently, however, no pain is felt until the fourth, sixth, or eighth application of the caustic, and it becomes more and more severe as the term of cure draws nearer. At first, perhaps, the caustic acts only on anormal tissues, which have generally but a small degree of sensibility; and, subsequently, upon those which approximate more nearly to a healthy state, and are consequently possessed of a greater degree of sensibility.

In most cases, the pain comes on an hour or two after cauterization; or, if pain already exists, it is exasperated; heat and smarting are felt in the region of the uterus and in the loins. These symptoms continue from one to twenty-four hours; rarely longer. They are mitigated by emollient injections nearly cold, small enemata of a strong decoction of linseed and of poppy-seed, and even by entire warm baths, long continued; finally, if necessary, small revulsive bleeding may be made from the arm. By observing these precautions, says Lisfranc, no serious accidents have ever occurred amongst the immense number of women whom I have cauterized. The pain of cauterization is much increased, if it be performed when the weather is stormy or the temperature variable. The influence of these atmospherical conditions upon women, and especially upon those of an essentially nervous constitution, is well known. Some women of this temperament cannot endure cauterization at any time. This however is a rare extreme; it never occurred to Lisfranc but twice. In these two cases—the pain having been removed by the judicious use of baths, emollients, blood-letting, and narcotics, and cauterization being

apparently strongly indicated—it renewed all the symptoms—produced pain, a sensation of burning, nervous exacerbation, and even diarrhœa, insomuch that it became necessary to relinquish altogether its performance.

Another more common but very striking anomaly is, that a woman who has suffered much pain from one application of the caustic feels none from another made eight days afterwards, and *vice versâ*. We have many times observed this fact for which we find it difficult to account.

If the neck shows, in the greater number of cases, but little sensibility to the action of caustic employed in the manner just stated, it is different with the vagina; the fall of a single drop of this liquid upon its walls occasions horrible pain and may induce quite formidable accidents; hence the necessity of employing the speculum when cauterizing the neck of the uterus. Preference should be given to the whole speculum, because it affords much better protection to the surrounding organs. Marjolin, in his lectures, cites a case in which, the use of this instrument having been omitted, the fall of a few drops of caustic upon the vagina excited inflammation, which terminated in its partial occlusion. I have myself witnessed an instance which somewhat resembles this. Madam — had been under treatment eleven months, at *La Pitié*, for an engorgement of the neck and superficial ulcers having a granular surface. She was cauterized a great number of times; the operation was very frequently followed by pain in the joints and almost always by slight salivation. The two cauterizations preceding the last had

caused a tolerable degree of pain; but the last was followed by an intense stabbing pain. The assistant had thoughtlessly withdrawn the speculum immediately after application of the caustic and prior to the use of the injection. It is probable that the pain was owing to a few drops which had run down upon the vagina; for all the symptoms of very intense inflammation in the pelvis, with constant vomiting, instantly supervened; they were opposed by energetic antiphlogistic measures. The first day — *thirty leeches; two general baths.* The next day — *venesection to eight ounces.* Third day — *fifteen leeches.* Fourth day — *another bleeding.* The sensibility of the upper part of the vagina was so much increased that small narcotized enemata could not be retained. The symptoms gradually but very slowly diminished until the 14th July, when she left the Hospital — though still suffering from nausea — in spite of the representations of Lisfranc, who showed her the danger to which she would be exposed by the discontinuance of treatment. Three weeks afterwards, she requested me to attend her. On examination, I found that the posterior and left surface of the neck had united with the corresponding portion of the vagina. This condition of the parts I naturally attributed to what had occurred at the Hospital, as previously to that time nothing of the kind was observable. The vagina was adherent even to the very edge of the os tinæ, in such a manner that the latter seemed to form a continuation of the vaginal wall. The adhesions were apparently too firm to be broken; and, moreover, the danger from which she had recently escaped recommended prudence.

In general, cauterization may be performed once a week; it should be deferred ten or twelve days, however, if the pain which it occasions be too severe. But how shall we know when it has accomplished its object; and when it may be discontinued?

The object of cauterization is to change the surface of the ulcer, to repress luxuriant granulation, and to diminish the hardness or simple hypertrophy of the circumference of the ulcer. If these results follow two or three applications of the caustic and cicatrization is proceeding from the circumference to the centre, this latter part alone requires to be touched; and, after four or five repetitions, its further use frequently ceases to be necessary. But very frequently, after five or six applications, cicatrization suddenly stops. The common practice, in this case, is to continue the caustic; and, for a long time, says Lisfranc, I shared this opinion; but I discovered it to be erroneous in the following manner. Illness, at three different times, has prevented me from cauterizing my patients during a month or more, and others of them, in different states, have been compelled by business to leave Paris; on seeing them again, I found that some were perfectly cured and the remainder were advancing towards a cure. These observations had a favorable effect; I have repeatedly verified their results, by many similar trials, and have now adopted the following course. After five or six cauterizations, when the excess of granulation has been removed and the induration and violet color have disappeared, when in short the ulcer presents a healthy aspect, I suspend the caustic, whether cicatrization is progressive or stationary, and during

three or four days direct emollient injections, for which others of a more healing nature are afterwards substituted.

It seemed at first as though the same results might be obtained from the chloride of soda in this case, as in ulcers of the leg. Not so however; it completely disappointed the hopes with which it was tried. We have used a decoction of pomegranate bark and of the roses of Provins, of different degrees of strength, but without any benefit. Finally, we had recourse to the infusion of Peruvian bark, in the proportion of a drachm of the powder to a pound of water, gradually increasing the proportion of bark, and afterwards substituting the decoction for the infusion, to increase still further the power of the medicine; this, as an injection, has appeared to us to be the best cicatrizant; it has caused ulcers to cicatrize in a few days which had resisted every other means.

There are some peculiar indications connected with these bark-injections which require to be known. They may occasion heat and slight smarting, the duration of which is from five to ten minutes. After this time, their effects are scarcely noticeable; but should they continue longer, the solution must either be diluted or its use suspended.

Thus, when cauterization fails, we succeed with the injections above mentioned; and if, as sometimes happens, cicatrization does not advance under their influence or stops in its progress, we return — after using them for some days — to the caustic, which then rarely fails of its effect. In these cases, it would seem as though the bark impressed upon the tissues a new

modification by which the action of the caustic is rendered more efficacious; and it is an observed fact that it hastens granulation.

The time required to complete the cicatrization is extremely variable and difficult to determine with any precision. Some cases are cured in fifteen days or a month, whilst others require from three to five months, and even more. I have at present under my care a woman who entered *La Pitié* for simple ulcers of the neck of the uterus and left it thirteen months afterwards with the same disease.

The cicatrix, when completed, very often becomes either wholly or partially white; but more commonly it remains red; the latter color might lead one to suppose the presence of a very superficial excoriation. An error of this nature would be the more unfortunate, inasmuch as cauterization of the supposed excoriation might destroy its tissue and reproduce the ulcer. A side-view being scarcely possible at the extremity of the speculum, we must, for certainty of diagnosis, resort to the measure—rubbing its surface with a lint-mop to see whether or not it will bleed—indicated when treating of erythema of the neck.

The treatment of ulcers, it is evident, comprises indications exceedingly dissimilar and meriting the earnestness with which we have presented them. We have recommended cauterization as a general remedy; not that cases do not occur in which antiphlogistics and revulsives alone succeed in effecting a cure; but because they are so rare that Lisfranc estimates their proportions as 1 to 100. It is of course understood, that cauterization would be useless if cicatrization

were advancing favorably under the influence of these simple medical means.

II. ULCERS.

1. *Simple ulcers.* — Solutions of continuity upon the neck of the uterus exhibit varieties both of aspect and situation. In some cases, we observe that the alteration here, as also on the free surface of the mucous membrane of the urethra in gonorrhœa, consists merely of the destruction, in detached spots, of the epithelium of the mucous membrane; sometimes it has disappeared from a very large surface and principally at the inferior circumference of the uterine orifice. The reticular tissue is exposed, hardened, and, as it were, granular. Thus these ulcers are sometimes merely a simple excoriation, whilst at others they are slightly excavated; in many cases, their edges — from the increased thickness of the mucous membrane — being tumid, raised, and perpendicular, make them appear more excavated than they actually are. Occasionally the surface of the ulcer is traversed by fissures, or studded by small conical elevations, which communicate to the finger a sensation similar to that from touching a dog-skin. These elevations may grow and, from their luxuriant developement, may become at a later period true vegetations; the fungous appearance, which they assume under such circumstances, has induced the inexperienced to suppose them cancerous.

The more usual seat of ulceration is on the exterior of the neck, near its inferior opening; but, as the under

lip of the mouth is the seat of inflammation, eruptions, and ulcers, more frequently than the upper, the same predilection is observable on the posterior lip of the os tincæ, which is constantly bathed in the secretions flowing from the cavity of the uterus. It is here that erythema, phlyctenæ, and excoriations are habitually seated. We notwithstanding find ulcers elsewhere, as, for example, between the lips of the os tincæ and even at the lower portion of the cavity of the uterus. It is easy to conceive the great importance of an early detection of ulcers which commence in these regions, in order to check their progress as soon as possible and prevent the tissue of the neck from being destroyed and, as it were, scooped out from within outwardly. The touch alone can detect the existence of ulcers so situated; the orifice, being usually dilated, allows the entrance of the finger; the surface of the uterine mucous membrane, instead of being smooth and like a serous membrane, as it is in a healthy state, is found thickened, villous, rough, and liable to bleed, however delicately it may be touched.

In such cases we cannot fail to recognize disease, though it is not always easy to determine its extent with any precision. Ulcers at the entrance of the os tincæ are sometimes concealed by the approximation of its swollen labia, which form a considerable projection into the vagina. By raising the anterior lip with a small rod, as was described in speaking of the speculum, these ulcers on the interior of the neck can be easily seen and touched.

Some superficial ulcers bleed with the utmost facility; they are suspicious. In the first place, this acci-

dent indicates an engorged state of the uterus, no matter from what cause; and, in the second place, it affords more reason to fear the developement of a kind of tumor of varicose structure, which will be described hereafter. In other cases the slightest excoriation, either with or without induration, may give rise to all the symptoms of confirmed cancer, such as fetid discharge, lancinating pains, and great deterioration of the constitution; and even as atonic though simple ulceration of the legs may have a fatal termination, so may death be the result of simple ulcers here, if not arrested in their progress.

These ulcers do not affect the tissue of the uterus deeply; during the cholera-epidemic we had anatomical proof of their simplicity. Many of our patients having died, the neck of the uterus was minutely examined; the mucous membrane was found red, softened, slightly fungous; the ulceration was very superficial; and beneath it the parenchyma of the uterus was sometimes superficially diseased and easily torn, and at others absolutely healthy.

According to some practitioners, a very large proportion of ulcers of the neck are owing to pressure, to friction of its extremity against the walls of the vagina, in consequence of deviation of the body of the uterus. This may possibly be the cause occasionally, yet if we reflect that, in the great majority of cases, the ulceration — instead of being seated upon the most prominent point of the edge of the uterine neck, which would naturally press against the wall of the vagina — commences almost invariably about its entrance and reaches, most frequently by its extension only, the

more external parts of the os tincæ, we shall be induced to confine the influence of this cause within very narrow limits. We shall hence appreciate at their proper value, as curative means, all those mechanical appliances (pessaries) whose object is to replace the uterus in its normal direction.

We mentioned having seen, at *La Pitié*, simple ulcers which had resisted for years the means of treatment employed for their cure; the following fact is of a similar character.

Prevost — single — thirty-three years of age — operative — had had leucorrhœa from puberty, which was sometimes accompanied by very troublesome pruritus and smarting; (according to her own story, this disease was an hereditary affection) — temperament bilious-sanguine. She became pregnant towards the close of 1826; and immediately began to experience pruritus of the vagina accompanied by a discharge, though in no great quantity; these symptoms varied, however, both in duration and severity. Her confinement was favorable. Eleven days afterwards, she fell into a cellar ten feet deep and struck upon her nates; she suffered from this accident merely a temporary suppression of the lochia, which reappeared on the next day. From this time and during all 1829, the patient complained of slight pain about the pelvis. Though the progress of the affection was slow, yet at the commencement of the next year she entered *La Pitié*, Feb. 1830, the severity of the pain disqualifying her for work. Examination discovered considerable hypertrophy of the os tincæ and a deep but simple ulcer with some signs of inflammation. These latter

were treated by small, revulsive bleedings from the arm in the interval of the catamenia, general baths, injections, emollient drinks, a light diet, and repose. The ulcer afterwards was repeatedly cauterized. The condition of the patient improved, but very slowly; nor was her cure complete till she had been in the hospital eighteen months.

Was the uterine affection in this case the result of parturition, or of the fall she sustained eleven days afterwards? The question is not easily answered. It is a fact, however, that the latter cause has a very powerful influence upon women previously in good health, and consequently less disposed to uterine disease than one recently confined. Madam C—— had enjoyed till near the forty-eighth year of her age most excellent health, wholly unimpaired by nine accouchments. At that time, she fell backwards down stairs and bruised her sacrum very severely. She instantly began to experience all the symptoms of uterine disease; menstruation was less abundant and painful. After three months of suffering, which had resisted the general treatment till then employed by her physician, I was called to take charge of her. The immediate effects of her fall had entirely disappeared; all her complaints now centred in the uterus. The disease was apparently confined to the neck, which was quite voluminous, but not indurated; tender, red, slightly gaping, and studded with excoriations on the posterior lip, near the orifice. Independently of the pains in the loins and dragging pains in the groins, she complained of burning and shooting sensations in the pelvis, which she referred particularly to the coc-

cyx. The emollients hitherto employed having produced no amendment, I thought that the obstinacy of the inflammatory phenomena and of the shooting pains might be attributed to the excoriations. I therefore immediately destroyed their influence by slight cauterization with the acid proto-nitrate of mercury. Immediately afterwards, *emollient injections; then a general bath for two hours.* — The symptoms diminished astonishingly; at the second cauterization, four days afterwards, the neck had lost its red and injected appearance. Cicatrization was complete after five applications of the caustic; two bleedings of eight ounces each, emollients, general bathing, and repose formed the rest of the treatment. As she was strong and exceedingly nervous, I insisted strenuously upon the use of long-continued bathing; it succeeded admirably. At the expiration of three months, Madam C — recovered her former state of health, and it has now continued good for more than a year; it experienced a slight interruption only at the time of the attempt of Fieschi. When the explosion took place, she was at her window in the second story, by the side and nearly on a line with that from which the fatal machine was discharged. The fright instantly arrested her catamenia, which had been flowing about twelve hours. On the next day, I found her thorax covered with red, but not very bright patches; slight headache; respiration considerably embarrassed; pulse somewhat hard (82); a sensation of tension and weight in the loins. As she is extremely averse to being bled, not an easy operation either, from her enbonpoint, she urged me to do all that I could to save her from it;

general bath; ergot gr. xxx, extract of opium gr. i—six pills, one every evening. On the next day, she was better; the red patches had nearly disappeared; less pain in the loins. Third day—*another bath; continue pills.* From this time there was no appearance of indisposition; the following month the menses resumed their regular course.

What influence had the treatment in this last indisposition? Did the symptoms cease of themselves? Or rather did the ergot, by dissipating recent congestion, prevent or arrest the reflected action of the uterus upon other parts of the system? This, indeed, was the purpose with which I prescribed it; but the explanation of the facts, whatever it may be, I leave to others.

2. *Scrofulous ulcers.*—By this term we designate ulcers consequent to the softening of tubercles in the neck of the uterus. (Engorgement, occasioned by tubercles which have not yet advanced to the stage of softening and of suppuration, has already been described.) In the five or six cases with which we have met, the general constitution of the patients and the discharge, from a small orifice, of a cheesy matter, similar to that which flows from the cervical glands in a state of suppuration, leave scarcely a doubt as to the diagnosis. One of these cases was in ward St. Augustin; and it was observed that, whilst the neck was passing into the speculum, the pressure made by it forced out a sero-caseous matter from a small orifice, leading into a cavity in the wall of the uterus. This patient recovered, became pregnant, and had a favorable labor. We have also in our remembrance the ward-attendant of

ward St. Augustin; her uterus was of an enormous size; and its posterior wall contained a tuberculous cavity which opened externally; after being under treatment two years, she recovered and now enjoys perfect health.

Tuberculous abscesses ordinarily follow the same course as acute or chronic abscesses elsewhere; when fluctuation is perceptible to the finger, an opening may be made into them with a scalpel.

The narrow and fistulous orifices gradually enlarge; the destruction of their edges by ulceration soon exposes the very bottom of the cyst, which is of a pale grayish color; its margin is uneven, fringed, and perpendicular; and there issues from it a profuse discharge of matter of disagreeable odor, though not the odor of cancer. Occasionally, an engorgement of the neck and even of the body of the uterus exists at the same time. This was the case with the ward-attendant above mentioned; long after cicatrization of the ulcer, she retained engorgement of the body of the uterus; the resolution of it was extremely tedious. At one time we were seriously apprehensive of the result; for if the engorgement had depended upon the presence of other tubercles, they might have opened into the peritoneum, with a fatal result. Inequalities on the surface of the uterus have more than once led to an erroneous belief in the presence of carcinoma. We ourselves, together with many others, made this mistake in the case of the ward-attendant in question. With the exception of lancinating pains, all the symptoms of cancer do in fact exist. A correct impression of the true nature of the disease may be derived in the

first place, from the fluctuation alone; but the discharge of caseous matter, the facility with which the ulcer assumes a healthy aspect, and the rapidity of cicatrization will render future uncertainty impossible.

The first object of the treatment is to subdue any existing inflammation, by means of antiphlogistics; they are to be employed however with caution, on account of the constitution of the patients, which is invariably scrofulous. We may, at a later period, resort to astringents and cauterization — assisting their favorable operation by the internal use of tonics and attention to all those hygienic measures calculated to modify the constitution.

The disease is, at times, entirely local; in such cases it has no effect upon the general health, except from the inflammation produced by the progress of the tubercles, which is frequently very slow.

Madam —, thirty-two years of age — mother of one child — had been troubled for about two years with retarded catamenia, accompanied by dull pain about the loins. Her condition gradually became worse; severe pain in the uterus was followed by an abundant, thick discharge. Thinking that the air of Paris might have some effect upon her health, she returned to her father's house in Poitiers, where she was attended by the family physician. On examination, he found the neck of the uterus slightly enlarged and the uterus a little prolapsed; and consequently supposed that all the symptoms were occasioned by relaxation of the organ, and would be removed by strengthening it. For this purpose, he directed vinous injections; but, instead of improving, they aggravated

her condition. She now returned to Paris, and was placed by Lisfranc, who was at the time confined to his bed by calculus in the bladder, under the care of Carron du Villards.

The neck was found very voluminous and studded by isolated prominences, many of which had softened and were upon the point of suppuration. The diagnosis declared the existence of tuberculous disease.

As the acute stage was well marked, an antiphlogistic treatment was directed. — *Small and revulsive bleedings, diet, general bathing, injections, perfect repose.* Under its influence, the symptoms subsided; the tubercles suppurated — leaving in their place small ulcers, which cicatrized quite rapidly by the use of caustic. Five years have elapsed since that time, and Madam — remains perfectly well.

3. *Fungous tumors of the neck.* — This very serious disease succeeds, as has been already stated, to certain superficial ulcers which bleed with great facility. Some years ago, says Lisfranc, we saw in private practice two cases of the kind, which bled freely whenever the speculum was introduced. Although no softening of the tissues could be discovered by the touch, we were fearful of some more formidable disease, and proposed cauterization. The proposal was not adopted. Having been summoned again sometime afterwards, we found in both cases well marked fungus hematodes upon the neck, which caused death shortly afterwards. Fifteen months ago we discovered, in a lady dwelling in the environs of Paris, an ulcer having the same characteristic of easily bleeding. We again mentioned cauterization as the appropriate remedy. Her regular

medical attendant did not think proper to consent to it. Three months ago this lady came to consult us; she now has a fungous tumor of the neck of the uterus, the consequences of which it is but too easy to foresee.

In these three cases, the fungous or varicose tumor had passed beyond the neck and encroached upon the superior insertion of the vagina—thus rendering an operation impracticable. In every case therefore in which similar ulcers present themselves, our first care is to cauterize—unless severe inflammation exist—for the purpose of preventing further progress of so formidable a disease. This is the only mode of treatment from which we have ever derived favorable effects. Not six months ago we cauterized, at Orleans, a lady sixty-five years of age, who had an ulcer with the above mentioned characteristics; the cure was effected in a short time.

The fungous tumor when developed is soft, villous, intersected by fissures, and studded with nipple-like elevations; it pours forth in great abundance an albuminous exudation; is frequently the seat of severe hemorrhage; and generally attended with but little pain. The sole resource in the power of art—when it has passed the limits within which amputation is practicable—is to touch it lightly every eight or ten days with caustic, for the purpose of retarding its progress. In this manner we have succeeded in prolonging the existence of many of our patients. Compression might possibly be advantageous, but we have no facts relative to it. Amputation of the cervix is the only effectual remedy; and should be resorted to immediately in every case in which it remains practicable.

4. *Cancerous ulcers and vegetations.* — Cancer of the uterus is a difficult subject to treat; for in no other situation is the aspect of the disease more varied. Sometimes it appears as ulcers accompanied by vegetations, mushroom-excrecences, or hard points yet in a scirrhus state; at other times the finger penetrates into the tissue of the uterus as into a slough, from which it is withdrawn impregnated with a horribly fetid matter. In these cases the sufferers, worn down by pain, diarrhœa, and hectic fever, with a yellow complexion, and a characteristic odor diffused around them, plainly indicate the disease which is wasting their life and bringing it rapidly to a close. But at other times the ulcer, though dry and painless, eats away the tissues like those phagedenic ulcers observed upon the face. It matters little in practice whether these are or are not true cancers, as they must in every case be promptly resisted. For the pains commence as the disease continues and ultimately become frightful, especially in women of a nervous temperament. Sometimes they intermit in a singular and inexplicable manner, occurring every five or six weeks only; this is the case with some wretched sufferers in ward St. Augustin, whose lives we have prolonged more than two years.

At other times the general or partial engorgement of the uterus is complicated by vegetations or mushroom-excrecences, which are soft and easily torn; they choak up the vagina and even project beyond the vulva; bleed at the lightest touch; and pour forth matter in such abundance as sometimes to soak fifty or sixty napkins daily. This secretion exhales an un-

pleasant odor, though it is not the odor of cancer, and excoriates the thighs even when the precaution is taken to smear them with grease. But, what is remarkable, there is no other suffering than slight uneasiness and weight in the pelvis and a trifling pain in the loins. The patients lose neither flesh nor color; and these outward indications of good health conceal from the physician the danger of the case until he is startled from his security by the commencing discharge.

If this disease be cancer, how can we account for the absence of local pain? Generally speaking, pain does supervene when the disease is of long standing. I do not, says Lisfranc, consider this disease cancerous at its commencement, but that it tends by its persistence to become so. In three cases of this kind I have obtained a cure. In one case, pronounced incurable by many physicians, the mushroom fell off spontaneously and never appeared again. The patient's health at the present time is perfectly good.

When we have to deal with any of these alterations of a doubtful character, we commence — if their limited extent allow delay — by attempting to dissipate the engorgement. When the patients are getting weaker from the profuseness of the secretion and occasional hemorrhage, we have endeavored, in five cases, to destroy with the fingers the greater portion of these softish vegetations, and have then applied caustic to what remained. In two cases, the cauterization occasioned inflammatory symptoms, and it became necessary to discontinue it. In the third case, three years and a half were required to effect a cure. The

last two were promptly cured, though the engorgement persisted some months longer.

If these means fail, or if the ulcer be decidedly cancerous, certain practitioners still recommend the use of caustic. This opinion, says Lisfranc, is often dictated by the embarrassment they would feel if called upon to perform amputation of the neck and find the means of healing the wound. It has been said of cancerous ulcers in other parts of the body, that the use of caustic was inadmissible unless when the disease was so superficial that it could be destroyed by one or two applications. But, though they are unwilling to apply caustic to cancer of the breast with engorgement, they recommend it for the uterus! Cauterization might continue to be employed as long as the disease remains superficial and of limited extent, and the engorgement is slight; but, when the disease is deeper, and especially when it has affected the body of the uterus, it would be the extreme of imprudence to think of it. The sole resource in the power of art is amputation of the uterine neck.

It must moreover be confessed, says Lisfranc, that — setting aside the more simple ulcers of which we have spoken and the ulcers consequent to tubercles — the diagnosis of all the others is utterly obscure. Certain writers have endeavored to establish their characteristic signs, but they are not to be found at the bed-side of the patient. And yet, when the disease progresses and baffles our most judicious exertions, what matters it whether its carcinomatous character be or be not demonstrated, so long as the general health falters and amputation affords the only hope of arresting its pro-

gress? This is our answer to those superficial critics, who have cast upon us the reproach of amputating necks in which no scirrhous nor encephaloid tissue was discoverable. Should then the disease have been permitted to increase until it has become incurable? When any disease, whatever its nature, exerts a malignant influence upon the system, and when every other hope of cure has vanished, it should be extirpated without delay. This is the true philosophy of surgery.

Under these latter heads, I have confined myself to an exposition of the principles of Lisfranc. Strict adherence to his course would now require me immediately to take up amputation of the neck and thus conclude whatever relates to its degenerations. But I feel the necessity of adding a few details not forming a portion of his clinical lectures.

Ulcers, Mushroom-excrecences, and Vegetations of the Neck of the Uterus.

When the ulcers, whatever their nature, are left to themselves or treated in vain, fleshy masses of greater or less luxuriance shoot from their surface. These vegetations in general grow rapidly and form soft, fungous tumors, which bleed at the lightest touch; and sometimes much blood is lost. It is well to note this fact, because patients are quite disposed to attribute the hemorrhage to rough manipulation on the surgeon's part. These symptoms are common to the different kinds of vegetations, at a certain degree of development. The detached parts then join, anastomose, and group together like cauliflower or coral. Finally, a

mushroom forms about the neck and obstructs all examination of it either with the finger or speculum.

Sometimes, these vegetations are strangled towards their pedicle by the tissue of the neck, through which they shoot forth as through the holes of a sieve. In this case, they not infrequently shrink either in mass or in parts, and finally disappear in furnishing a very fetid, ichorous discharge. This was undoubtedly the way in which the case, mentioned by Lisfranc, terminated.

There is little, perhaps no difference at all, between fungous and carcinomatous vegetations. The sole distinction probably consists in the stage to which the disease has proceeded. This is also the opinion of Lisfranc, for he says that *he does not consider it cancerous at its commencement, but that it tends by its persistence to become so.*

When touching under these circumstances, it is easy to remove with the fingers large pieces of soft, grayish, pulpy, and friable vegetations, which emit an exceedingly fetid odor, *sui generis*, that adheres to the hands in despite of repeated lavations in chloruretted washes.

Generally speaking, every ulcer of the neck is regarded as carcinomatous which is seated upon engorged tissues, has a grayish bottom, and hard, knotted, and everted edges, discharges an ichorous and fetid matter, and is accompanied by lancinating pains dependent on the nature of the disease.

But every variety of uterine disease hitherto described may be attended by the pain and discharge attributed to cancer; and the grayish appearance is common to most ulcers of the neck. Carcinomatous ul-

cers, therefore, have no definite characters, especially when the disorganization is of limited extent. We consequently feel some doubt — a mistake is so easy — as to the reality of those pretended cancerous ulcers, the cure of which is said to have been accomplished by antiphlogistics and cauterization.

We are of opinion with Marjolin, that these ulcers — probably of that variety which he designates by the term *Cancroid* — were, more commonly, merely kept up by an inflammatory cause entirely local in its nature, the removal of which was naturally followed by a healing disposition of the solution of continuity, at the same time that its mode of action was modified by cauterization.

If amputation of the neck of the uterus were as safe an operation as has been recently proclaimed; if the proportion of *eighty-four* cures to *ninety-nine* cases were entitled to any confidence, practitioners need no longer be embarrassed at meeting these more than doubtful ulcers. Instead of subjecting their patients to a long and frequently fruitless treatment, to say the least; instead of allowing, by procrastination, the ulcer to increase in depth, especially in the direction of the cavity of the uterus — a situation in which it is generally impossible to ascertain its extent — they would amputate immediately, and very rationally too. It would be disadvantageous to delay, when *every day was detracting somewhat from the patient's health* (Lisfranc); it would be pushing her to the side on which she would have the fewer chances of safety. For one of two things must be true; either *eighty-four* out of *ninety-nine* cases are cured, or these figures are

incorrect ; on the former supposition, it is expedient to act unhesitatingly, for I do not think that any practitioner pretends to cure, by the ordinary means, *eighty-four* out of *ninety-nine* cases of ulceration of a doubtful character. What motive could there be for hesitation ? Because practitioners *do not know how to amputate* the neck, as is daily repeated at *La Pitié* ? This objection however is not a serious one ; the operation is much more simple and easy than one would have us believe ; and as respects the immediate consequences, hemorrhage for example, it is mastered in any possible way, rather than in accordance with methodical principles so easily enunciated from the lecturer's chair, and which appear so charming in theory. I speak with the more confidence on this point, having been left to watch, in case of accident, with thirteen patients in succession, who had undergone this operation ; in six of the thirteen cases, I had to contend against terrific hemorrhage, and that in the presence of Lisfranc himself. In the second place, practitioners need not be deterred by the suffering which it causes, for the operation occasions scarcely any ; and the preservation of a greater or less length of the neck is a point of but little importance, inasmuch as its entire removal would not be a certain obstacle to gestation.

The reader is at liberty to allow the *eighty-four* successful cases, and to act accordingly ; but, having myself better reasons for an opposite opinion, in short possessing facts, collected from the same sources, entirely contradictory of such a statement, I will say with Velpeau, that *one has no right to be astonished when he*

hears intelligent men continue to inquire whether this operation is ever proper.

These considerations naturally induce me to advise the trial of some means suited to arrest the progress of the disease; means which, in some cases — probably before the cancerous degeneration was complete — have been perfectly successful.

Whenever there is a determination of blood to the genital organs, we should resort to general and revulsive bleeding to reduce the inflammation, also to diet, absolute repose, emollient injections, &c.

Under the influence of these means there is sometimes a striking diminution in the symptoms and in the pain. If not, we resort to narcotic injections of belladonna or hyoscyamus, in an emollient fluid. Osiander successfully employed distilled laurel-water. Narcotics by the rectum, when there is no contra-indication, frequently succeed very well. The liquid acetate of ammonia, also, is beneficially employed by some physicians.

When the chronic stage has become well established, cauterization may be tried, still however with much caution.

Frequently, the local symptoms hold on their course in despite of remedies, assuming pretty commonly an intermittent character. Every evening the abdomen swells, and a sensation of smarting, of burning, is felt in the pelvis; it seems as though the body would burst open; the patient loses sleep and appetite; her strength wastes, and the general symptoms grow worse almost whilst we look upon them. It is not improbable that the persistence of these phenomena is somewhat connected

with the presence of the ulcers, since Recamier — by frequently modifying the vitality of their surface by cauterization — has in similar cases arrested and even removed the general symptoms.

It is not, therefore, absurd to try cauterization, always however with much caution; and, *à fortiori*, should it be resorted to at first if the ulcer is in a chronic state. A general bath and cold irrigations should be employed immediately afterwards to prevent inflammation; if it show itself however, we must oppose it by more vigorous antiphlogistics. If the disease amend daily under these means, we should, though cautiously, continue them. In this manner I succeeded in curing three cases, in which the ulcers had a grayish bottom and hard, elevated, and vertical edges, by slight cauterization, assisted by irrigation thrice daily, continued for fifteen minutes and made with a syringe to throw a continuous stream; the liquid of injection was at first simple cold water; afterwards it was impregnated with a small proportion of a solution of chlorine.

In these cases, a short time only — five or six days — should intervene between each application of the caustic. When less frequent, cauterization apparently favors the ulcerative process, for it seems to exhibit more activity some days afterwards, unless again checked by a renewed application of the caustic.

Cauterization, however — though so powerful, in some cases, in arresting the general symptoms — is, most frequently, unable to bring the ulcer to a cure. The ulcer is usually surrounded by engorgement of greater or less depth, without the removal of which it cannot

be made to cicatrize, and the action of the caustic, certainly the most powerful resolvent, is insufficient, when the engorgement penetrates deeply, and the volume of the tissues is much increased. It must therefore be aided by other solvents. In these malignant ulcers, the engorgement is usually hard, more or less resembling scirrhus; and its resolution is slow and difficult. External resolvents, as issues, are scarcely of any avail; during the three years in which I have seen conium administered internally, I have not observed it to possess the least efficacy; its sole effects were headache and disturbance of the digestive organs; this is likewise the opinion of Marjolin. And I can moreover affirm that, during nearly the same length of time in which I carefully observed both the hospital and private practice of Lisfranc, I never knew an instance in which a hard engorgement of the uterus was cured.

There is one resolvent whose action upon the uterus is direct and entirely special; this is the *ergot*. Its influence in labor is, at the present day, generally admitted; it is known to possess the power of exciting in the foetus-distended uterus constant contraction of its fibres, which tend to reduce it to a less size, to atrophy it, as it were. This, its manifest action upon the distended uterus, likewise obtains with the organ in an unimpregnated state; but in the latter case the phenomenon is obscure and can be appreciated by its results only; thus we see this substance occasionally arrest hemorrhage, even from the unimpregnated uterus (*Sparjani, Trousseau and Maisonneuve, Negri, Chailly, &c.*); prevent uterine spasms, by hindering

the accumulation of coagula (*Crozat*); and cure leucorrhœa (*Dufresnois, Negri, Bocquet, &c.*)¹

¹ These reflections upon the effects of ergot—confirmed by success in two cases of hemorrhagic engorgement, wherein I had administered it in large doses for some days—induced me to employ it in those uterine diseases in which *reduction of the organ to a less size* seemed to be the prominent indication. I have now used it for some time in a very large number of cases, most of which had been under treatment, by the means just detailed, without deriving the least benefit therefrom. Among others was the patient mentioned at page 304. She came to me in the early part of August, about three weeks after leaving *La Pitié*, where she had stopped a year for superficial, granular ulcers. She was yellow, very much emaciated, extremely feeble, and without appetite; she had dragging pains in the stomach, pains in the loins, weight and shooting pains in the pelvis, and a very profuse, thick discharge. The neck as has been stated was adherent, voluminous, and soft; the free portion of the os tincæ was studded with soft, circular ulcers, which bled easily. The whole neck was of a bright red color, hot, but without much tenderness. During the following twenty-one days, the ulcers were cauterized three times; a pill—of two and a half grains of ergot and one sixth of a grain of extr. of opium—was taken nightly; injections and enemata were used. At the expiration of this time, a red circular patch existed in the place of the ulcers; the lancinating pains were quite rare; the discharge had nearly ceased; and her health was in every respect better. The pills were omitted shortly before the catamenia and resumed six days afterwards.—Sept. 7. No discharge, but a feeling of tension and turgescence in the pelvis—*venesection to six ounces*.—Nov. 7. After taking a warm bath, she experienced pain and a sense of weight in the pelvis—*venesection to four ounces—six pills of five grs. each*.—Jan. 4. The neck was perfectly healthy and without engorgement. We have seen that the lancinating pains gave way to the administration of this remedy. The same phenomenon occurred in two incurable cases, and in many cases of white induration in which this symptom existed.

Nine months ago I communicated these results to Malgaigne, who, at that time, had temporary charge of the service of Gerdy, of the hospital *St. Louis*. He immediately instituted a trial of this mode of treatment upon many patients. His success not only confirmed my statements, but far exceeded them. He administered the ergot in larger doses than I had done.

My usual dose has been from two to eight grains. I confine myself to

Instead of acting beneficially, cauterization sometimes occasions mischievous consequences which the

small quantities in cases of white induration — in which resolution may be expected to take place slowly — and during the existence of inflammatory symptoms.

Ergot, when administered alone, has sometimes occasioned vomiting or temporary diarrhœa, but combined with one sixth of a grain of opium in each pill, it is borne perfectly well. I have sometimes found that, when general debility, and an impaired state of the digestive functions are present, the pills did not produce their usual effect, being refractory to the digestive action. For this reason I had a sirup prepared, each spoon-ful of which contains two and a half grains of ergot, and one twelfth of a grain of the extr. of opium. The ordinary dose of it is two spoons-ful in twenty-four hours. This quantity acts more uniformly than six or eight grains of the powder, and quite as powerfully. When an instant effect is required, as, for example, to arrest hemorrhage or excite uterine contraction in parturition, the powder answers well enough, undoubtedly, and is better given in too large doses than too small doses, for it cannot be known, *à priori*, what proportion of it will act. But when an engorgement is to be gradually resolved, and the uterus reduced by degrees to its normal size and consistency, and when a remedy — whose uninterrupted action should be guided by the indications — is to be employed for the purpose, it is impossible to trust to a powder, the activity of which varies as a larger or smaller proportion of it may happen to be digested.

The more immediate effects of ergot, in ordinary cases, are the gradual cessation, sometimes the sudden disappearance of the dragging pains in the loins and weight about the rectum; the uterus rises in the pelvis; the appetite improves and often becomes excessive; at the same time, the spasms in the stomach cease; the leucorrhœa diminishes or even stops altogether. It is astonishing with what facility it prevents the sensation of weight in the loins and the slight leucorrhœa which usually follow the catamenia in women whose general health is uniformly good.

I have never found any ill effects follow the use of this medicine. In two patients, who were taking it in small doses, it produced a slight discharge of blood; this effect occurred repeatedly; but it ceased on the administration of larger doses. Many patients, after continuing its use for eight or ten days, have a sense of tension in the loins and pelvis, with some symptoms of plethora. The loss of four or eight ounces of blood removes these effects and allows the continuance of the remedy. I have

most judicious treatment cannot always successfully counteract. In these cases we must abandon its use, on finding, after some trials, that it endangers the patient's life by inducing metro-peritonitis or by aggravating the disease itself, and limit the treatment to palliatives or resort to other modes of cure; even indeed — if it be thought advisable — to amputation of the neck if still possible, or to extirpation of the entire uterus. In the following chapter, we shall demonstrate the value of these operations.

Fungous ulcers, covering the neck and pronounced carcinomatous by many physicians, have been cured, in one instance, by irrigation with cold water. As the patient's lungs were delicate and she was subject to catarrh, she was put into a warm bath, to prevent her being chilled by the operation, whilst a flexible tube carried the cold water directly to the diseased part. (*Gaz. Méd.* 1834.) Creosote and soot have had their success. In two cases, evidently carcinomatous, I used the preparations of soot without effect.

We have spoken of the difficulty of diagnosing the cancerous character of ulcers; it is impossible however to doubt, when the disease is of long standing and far advanced; when soft fungi, which can be easily torn, pour forth a profuse discharge of sanious and fetid fluid; when the finger can be thrust into the

even found it beneficial, when the patient's health is tolerable, to commence the treatment by a small bleeding. — In a considerable number of instances, warm bathing has renewed the local symptoms; it must be discontinued. — In no case has perfect repose been enjoined. — The dose is taken at bed-time.

On the 27th Oct. a paper containing a statement of these results was read before the Academy of Medicine.

ulcer as into a slough ; when its edges are elevated, hard, and tough, and its bottom a putrid mass ; and finally when it attacks the vagina and is accompanied by lancinating pains, usually referred to the coccyx and shooting thence to the loins, thighs, &c.

Notwithstanding the variety of cancerous affections of the uterus, they may be arranged under six principal heads in the following order ;

1. *Scirrhus cancer, properly so called.* — Its principal characters are increased size, and induration of the organ ; softened and then ulcerated tumors ; discharge moderate or very profuse ; frequent hemorrhage ; pain quite severe. This state of things is a consequence of scirrhus.

2. *Indurated scirrhus cancer, with or without solaneiform, condroid, or osseous degeneration.* — This variety may be recognized by greater induration than in the preceding species, it varying from the *solaneiform* to the *condroid* (*Recamier*), or *cartilaginous* and even *osseous* state (*Mural cancer of Duparcque*).

3. *Fungous cancer.* — Softening under various forms, to which Boer has applied the term *pultaceous softening* ; broad and elevated ulcers covered by vegetations ; several solutions of continuity ; a very abundant discharge of sanies ; hemorrhage of two kinds — one from the fundus of the uterus, and the other an exudation from the solutions of continuity ; pain more or less severe. Though sometimes dependent on scirrhus, it may occur without passing through this state. It very frequently succeeds hypertrophy with simple induration, or the softening of tubercles.

4. *Medullary encephaloid cancer* (*Maunoir, Bre-*

schet, Scarpa, Panizza). *Medullary tumor* of the English. Pulpy, cerebriform softening, either general or isolated, sometimes contained in a kind of cyst; very fetid discharge; partial separation of softened fragments; very copious hemorrhage. It often forms without previous scirrhus alteration; and succeeds, more frequently than is supposed, tuberculous degeneration. In many cases, the same morbid structure is found in other parts of the body.

5. *Cancer hæmatodes*; (*Spongoid inflammation* of Burns; *bleeding cancer*). Tissue soft, elastic, erectile (*Dupuytren*); hemorrhages very profuse, endangering the patient's life. This species, before it has reached an advanced stage, may be considered as an aneurism by anastomosis, its tissue consisting principally of blood-vessels, the rupture or ulceration of which occasions the arterial hemorrhage.

6. *Mixed cancer*. — In this variety several species may be found united.

In cases of far advanced disorganization, the present state of the art enjoins it upon the physician to confine himself to an expectant course of treatment, merely combating new symptoms as they arise. The less he does, the better the patient. He should prescribe moderate exercise to keep up the strength and to facilitate the digestive functions, unless walking or riding in a carriage occasion pain or hemorrhage; also enemata, unless by their distension of the intestines they produce ill effects; and general bathing; this latter however must be used discreetly. If the tube of the syringe can be introduced without causing laceration, injections, either emollient or of conium,

belladonna, &c. may be thrown into the vagina ; besides their sedative effect, they act beneficially by washing away the matter and organized fragments of which the decomposition is so rapid. If hemorrhage occur — of such a nature that the principles laid down in treating of this phenomenon are inapplicable to it — great advantage may be derived from the administration of *ergot* for a fortnight, more or less, in small doses. This substance has an immense advantage over bleeding ; it neither debilitates nor accelerates the general symptoms ; and, moreover, it is preventive at the same time that it averts the instant danger. These are the cases in which narcotics are particularly needed ; they are of great comfort to the wretched and pain-worn sufferer. The diet is to be unstimulating, but composed of articles of easy digestion, and nutritious. Resolvents, such as issues, disquiet the patient without any beneficial result.

In cases of this kind, it is incumbent upon the physician to alleviate the sufferings of his patients not merely by the resources of the *materia medica*, but also to encourage them to fortitude by a moral influence. They frequently complain that nothing is being done for them ; at the same time that the danger of active treatment is pointed out, their minds may be quieted by prescribing some innocent draught. The physician may also hold out hopes of cure even when he feels none himself ; this little, and, certainly allowable deception produces quite a good effect.

The word *ulcer* is a terror to all women ; and a patient is pleased to hear that her disease is not of such a nature. But at the same time that we promise a

eure, the completion of which will be tedious, we should speak of the symptoms which we foresee, as a necessary good. Thus we warn her that she will suffer greatly, but that her sufferings will be occasioned by the efforts of nature to restore the organs to a healthy state; that she will undoubtedly emaciate, for the size of the womb cannot diminish without a corresponding diminution of the body; that the discharges and the hemorrhages are disgorging the diseased organ; that the diarrhœa is a powerful, natural derivative. There are a thousand other modes of exerting a control over the patient's mind, which can be better imagined than pointed out. In tranquillizing her feelings by these delusions, we at least save her the pang which she would suffer by a presentiment of the future reality.

CHAPTER IV.

AMPUTATION OF THE NECK OF THE UTERUS; EXTIRPATION OF THE ENTIRE ORGAN.

THIS chapter will be devoted exclusively to the consideration of excision of the cervix and removal of the entire uterus. That our remarks may be more clearly understood, we shall first present, in a distinct form, the views of Lisfranc on amputation of the cervix; and then, discarding all theoretical ideas, revert to the historical records of the operation, and examine its real merit upon indisputable facts—unfortunately, too little known.

I. AMPUTATION OF THE NECK.

In consequence, Lisfranc states, of a large number of women having left the hospital (*La Pitié*) cured without an operation, patients apply sooner for medical assistance; and, instead of performing, as he did four or five years ago, fifteen amputations of the neck annually, scarcely do one or two cases, in which the operation is indicated, now present themselves; and yet the number of patients has been constantly on the increase. This fact renders it probable that the operation will become the less frequent, the earlier patients seek professional assistance.

The first condition necessary to the possibility of the operation, in well confirmed cancer, is, that the disease have not affected tissues situated beyond those limits which the knife cannot pass without exposing the patient to the most serious danger. These limits are the superior part of the attachment of the vagina upon the neck of the uterus. Its termination is easily recognized by the following method. Pass the finger along the neck until it reaches a slight circular elevation, formed by the union of the vagina to the neck. Having reached this ring, carry the finger still higher up, until it comes to a slight depression ; this point indicates its termination. The breadth of the ring, over which the finger has now passed, is the extent of the insertion of the vagina. In the *Surgical Anatomy* we have stated its dimensions with details.

The operator then determines what length he can cut from the cervix without penetrating the peritoneum, which would inevitably happen if he went above the ring just prescribed. This quantity is much greater now, in consequence of the morbid condition of the neck, which is usually hypertrophied ; its volume has increased in every dimension, and consequently in length. This growth, in some forms of cancer, is occasionally so exuberant, that, whilst the cervix is healthy at its origin, the two lips of the os tincæ have degenerated into a mass of vegetations, which descend even to the inferior part of the vagina.

To ascertain the extent of the disease with precision, great experience in touching is requisite. We must endeavor — by means of the fore-finger and by employing each hand alternately in order to examine the

whole circumference of the disease—to isolate the carcinomatous tissues from the origin of the vagina, to ascertain that its superior portion is not affected by scirrhus engorgement, and that no ulcers exist upon its walls. In examining its posterior region, increased attention is requisite; the disease, pretty generally, advances more rapidly in this direction, and the ulcerated surface is then beveled at the expense of its posterior portion. In other cases, there is no mushroom-vegetation to be circumscribed. The neck is merely more or less hypertrophied, more or less hard, and its external free surface in the vagina is free from ulcers. But in its centre are found ulcers and vegetations, which extend to variable heights and sometimes cover the whole interior of the uterus. In these cases, the cervix is usually enough dilated to allow the finger to continue its examination to the very centre of the uterus. The operation is still practicable, however, even though the ulcerated surface should pass above the line of attachment of the vagina, provided the interior of the body of the organ is not affected. By scooping out the neck, in the form of an inverted cone, it is possible to cut with safety beyond the limits of attachment of the vagina; the shell of the neck still remains, as a ring, to receive and support this canal.

The examinations should be minute; and, to avoid error, it is indispensably necessary that they should be frequently repeated. In many cases, indeed, the advice of another should be asked.

The extent of the carcinoma is now supposed to be well ascertained; its limits are distinctly marked out,

and, in this point of view, the indication to operate is positive.

But, in this as in every other operation, the general condition of the system must be taken into consideration. It sometimes expressly contra-indicates the operation. We shall proceed to examine each organ separately, and see what indications may be drawn therefrom, commencing, in the first place, with the general condition of the body of the uterus, and then passing to the organs of the pelvis and thorax.

1. An operation is generally dissuaded, whenever the body of the uterus is engorged. This opinion is too exclusive, according to Lisfranc, for the following reason; accoucheurs have demonstrated that, even in cases of extra-uterine pregnancy, the uterus is generally enlarged to twice its normal size. Lisfranc has observed similar results, whenever deep-seated inflammation has existed for any time in the pelvis. If the neck be sufficiently diseased to necessitate an operation, the volume of the body of the uterus will of course be increased. The truth of this assertion has been proved by the autopsy of patients who have died shortly after the operation. Lisfranc satisfied himself that, in these cases, the size of the uterus had only doubled, and that the hypertrophy was simple merely, and not sufficient to deter from operating.

2. Lisfranc is of opinion that if the disease be attended by scarcely any pain, its cancerous character is far from certain, even in those cases in which the uterus is more voluminous than in the circumstances above mentioned; and that, as the death of the patient is considered by all surgeons as inevitable, ablation of

the cervix should be tried. He states that he has done it. The increased bulk of the organ, consisting of simple, white engorgement, disappeared after the operation. But, before recurring to this extreme remedy, an attempt should be made — if the progress of the disease will allow time — to reduce the body of the uterus to a less size, by the appropriate means of treating engorgement. Lisfranc has many times succeeded in reducing this organ almost to its normal dimensions.

3. Independently of the volume of the body of the uterus, the base of the carcinoma may appear to be much more extensive than it really is. At first sight, the morbid change in the tissues would be supposed to extend beyond the limits, which we have assigned, of the practicability of an operation. The case however is far from being hopeless. In a number of similar instances, Lisfranc has succeeded — by a well combined course of treatment, resembling in general that which he uses in engorgements — in limiting, in concentrating the morbid alteration; the carcinoma, which was at first inaccessible to an operation, is thus brought within that class of cases which we have stated to be proper subjects for excision. Lisfranc derived this idea from the following circumstance. Some years ago, when the physiological school held absolute sway, it was pretended that cancer could be cured by antiphlogistics. He immediately submitted these novel theories to the test of experience, in order to cull from them whatever of true value they might contain and render them useful to the art. He therefore treated cancer by antiphlogistics. Though he

never witnessed an instance in which degenerated scirrhus or encephaloid cancer was entirely cured, still he derived from this mode of treatment extremely favorable results, which we submit to the reader. In proportion as he employed antiphlogistics — graduated in every case to the strength of the individual — the cancerous mass diminished in all its dimensions; the engorgement was gradually resolved at its circumference; and the disease, by this kind of self-introcession, became more and more concentrated; but, on the other hand, the disorganization proceeded at the centre, with a rapidity proportioned to the benefit obtained at the circumference. It seemed as though the disease had concentrated its destructiveness upon that point.

One great desideratum, namely, concentration of the disease, was however thus obtained; and, in this respect, the fact will be acknowledged to have some value. The result indeed is, that it has oftentimes been possible to remove — without any other dangers than those attached to similar operations — cancers thus concentrated, which their indurated prolongations into the neighboring tissues had previously placed beyond the reach of an operation.

How happens it that a portion of the cancer can be thus removed, whilst at the same time the disease is advancing with increased rapidity at its centre? In other words, was the part, which has been restored to a normal state, affected in the same way as the centre? An examination of the tissues furnishes an explanation of the phenomenon. Whenever we have had occasion to examine a morbid specimen of this

kind, we have found the centre formed by a grayish, pultaceous jelly, resulting from the liquefaction of scirrhus substance ; then, proceeding from the centre to the circumference, came a scirrhus, lardaceous tissue, intersected by fibrous radii. The lardaceous character gradually disappeared and passed insensibly into an indurated fatty tissue, which was again lost in a white, simple, cellular engorgement ; finally, at the circumference nothing was found but hypertrophied cellular membrane, a consequence of inflammation. We can, in this inverted manner, follow step by step the progress of the inflammation by the disorders it has occasioned. The results, stated above as being produced by antiphlogistics, are consequently owing to the extinction of inflammation in tissues still capable of being restored to their normal condition. Might not one presume, *a priori*, that this result would follow ? Is not cancer when once developed — whether its cause be inflammatory or not — like a splinter sticking in the flesh, a centre of continual irritation ?

4. An exposition of these details was necessary to a perfect understanding of the diagnostic point, whether or no a cancerous disease affecting the uterus is still in a condition to justify an operation. If then the ulceration does not extend beyond the limits of the vagina, but only the indurated tissue whereon it is seated, the case is not yet hopeless. By the appropriate treatment for engorgement the disease may be simplified and restored to the conditions fitting it for an operation. Is it justifiable to operate when the size of the ovaries is increased by engorgement ? We know that appropriate treatment can arrest and even disperse

it. If therefore the patient's constitution is good and the engorgement of moderate size, Lisfranc recommends an operation. Larrey cauterized the neck of the uterus, in a young lady, with the red-hot iron; and, notwithstanding the left ovary was enlarged to triple its size, she perfectly recovered. Lisfranc excised the cervix successfully, in a case in which the right ovary was four times larger than normal. Under the influence of appropriate treatment, the tumor has now remained stationary for six years.

5. In general, surgeons forbear operating in cancerous disease, when lymphatic ganglia, which cannot be removed, are developed around it. The experience of Soemmering and Desault is at variance with this principle. These two surgeons have left on record cases in which, after extirpation of cancer, engorged ganglia in its vicinity spontaneously disappeared.

In our profession, as is the case in every other, we are disposed to run into extremes, simply from not making a distinction of cases. If the ganglia are numerous, hard, voluminous, knobbed, adherent, and not capable of being removed, we should renounce all idea of operating. If however they are recent, few in number, of moderate size, and still movable, Lisfranc coincides in opinion with the two distinguished surgeons whom we have quoted; he operates. May it not be admitted that, in the majority of cases, the degeneration of these ganglia is merely consecutive to their inflammation, determined by so powerful a cause of irritation as cancer? The remarks in the third paragraph on the pathological anatomy of carcinoma are some confirmation of this opinion.

Moreover, carcinoma of the uterus is, relatively to the point under consideration, most favorably circumstanced. The importance of the fact which we are about to present is particularly deserving the attention of surgeons. Of all cancers that of the uterus produces, the least frequently, engorgement of the organs in its vicinity and, consequently, of the lymphatic ganglia of the pelvis.

Bayle pointed out the circumstance a long while ago; and Lisfranc says that he has often verified it, and that this kind of engorgement is so rare, that he has met with only two instances of it in his extensive practice, and those quite recently. Shall we say with Bayle, that this peculiarity is owing to the scanty absorption, by the lymphatics of the uterus, of the ichorous matter from the ulcer? We might equally infer, that diseases of the uterus are less frequently carcinomatous than is generally believed. Whatever may be the cause, this admirable fact in pathological anatomy does not the less exist; and it explains, as Lisfranc says, why ablation of cancer of the uterine cervix — when a certain quantity of healthy tissue surrounding the disease is removed at the same time — is far more successful than a similar operation for carcinoma in other situations.

6. Is the operation necessary when the cervix is largely ulcerated, but the carcinomatous character of the ulceration is not certain? If the means of treatment, which have been detailed in the course of this work, not only fail in curing, but even produce no amendment in the disease; if they do not prevent those ravages the extent of which threatens to make

the case hopeless, Lisfranc operates without hesitation. The patient's death is now, he says, acknowledged by all to be inevitable; an operation is therefore her sole resource. Do we not know, moreover, that there are ulcers of the leg, which, though not carcinomatous, exercise such a deleterious influence over the constitution as to require the sacrifice of the limb? Why may not simple ulcers of the uterus influence, in a similar manner, the constitution of women? The sympathetic relations of the uterus with the organs in general are far more intimate and active.

All these indications, arising from the state of the uterus and its appendages, being well established, let us examine the other organs of the system.

1. A principal point is to ascertain, satisfactorily, the non-existence of chronic or latent peritonitis. Excision of the uterine neck might elevate this affection to an acute state and thus endanger the patient's life. The rapidity, with which a chronic affection of this kind proceeds to a fatal termination, when it assumes an acute character, is well known. Two patients, operated on by Lisfranc, died from this accident within forty-eight hours. The autopsy discovered upon the peritoneum well organized false membranes. These accidental productions, judging from the time necessary for their formation, must have existed much longer than forty-eight hours. The existence of latent peritonitis is not always, however, easily ascertained. Without dwelling upon the symptoms, by which, as pathologists tell us, this disease can be recognized, we shall merely mention one sign that may be very important in making the diagnosis, and which, in

many cases, has proved useful to Lisfranc. In performing the touch, let the finger, when it reaches the level of the cervix, first push the wall of the vagina about an inch one side and then upwards, without attempting to touch the uterus ; if in the manœuvre — which, for greater certainty, may be performed upon different points of the circumference of the vagina — the pressure occasion pain, Lisfranc believes chronic peritonitis to be present. This diagnostic sign is not yet supported by proofs sufficiently numerous to allow it to be considered as constant ; we mention it with the intention that it may be submitted to further trial.

2. The speedy reaction of the uterine system upon the alimentary canal is well known ; an illustration of it, relatively to the stomach, occurs in most women during the early months of pregnancy. In many cases, cancer of the uterus produces an irritable state of the digestive organs ; sympathetic gastro-enteritis manifests itself. But, whether the irritation be limited to the stomach or intestines merely, an attempt should be made, prior to the operation, to restore the alimentary canal to its normal condition. The surgeon who acts otherwise will be likely to see these symptoms aggravated, and frequently afterwards become to him a source of anxiety.

3. In speaking generally of uterine diseases, we mentioned the close sympathy which existed between the thoracic and generative organs. We saw that uterine and pulmonary affections reciprocally modified each other in an inverse ratio. The cure of the uterine disease may, therefore, endanger the pulmonary organs and, consequently, the patient's life.

4. We have stated, that patients are frequently distressed by violent palpitation. Is the phenomenon dependent upon a nervous state of the heart or upon organic disease? This is a very important question. In the first case the operation would quiet the palpitation; whilst on the contrary it would aggravate it, if aneurismal. The determination of the difficulty, however, is not always easy, as may be judged from the following fact, which excited doubt in the minds even of those who had made diseases of the thorax their especial study.

Eight years ago there was a patient, named Josephine, in the hospital *St. Côme*. She had ulceration of the neck of the uterus, and the necessity of amputation was urgent; but she suffered at the same time from palpitations of such violence, that the bed-coverings were lifted up by the shock. Lisfranc asked the assistance of Landré-Beauvais, and Laennec. They thought they recognized active aneurism of the left ventricle. In this case the operation would be useless, and dangerous by accelerating the disease of the heart. As however the patient's life was at stake and the operation formed her sole chance of safety, it was decided to incur the risk. Four days after the amputation all the cardiac symptoms disappeared; one might indeed say, that the patient no longer had a heart. This woman, who was still young, enjoys good health at the present day. She has since become a mother, and her confinement was a very favorable one.

We have now reviewed all the organs over which the uterus exercises more or less of influence. As we have never observed any direct sympathy between it

and the liver, spleen, &c., and as they do not seem to be reciprocally modified, in any special way, by each other's pathological condition, the latter suggest no other indications in this particular operation, than they do in operations generally.

There are however two circumstances — diathesis and hereditary predisposition — which might embarrass the practitioner. In the former case Lisfranc approves of operating, provided the patient is not very weak and in a state of marasmus. The latter contingency does not exclude an operation, for he has also remarked that uterine diseases were quite as tractable to remedies in this as in other cases.

Lisfranc's operation. This mode of operating is based upon two essential points of surgical anatomy; 1. The breadth of the attachment of the vagina to the neck; 2. The mobility of the uterus, by means of which the neck can be drawn down, without any danger, to the vulva.

The position of the patient is the same as that for lithotomy. In this operation Lisfranc employs a bivalve speculum, so as to be enabled to withdraw it without deranging the hooks. The speculum having been previously introduced, he seizes the neck, say transversely, with the double hooks of Museux. The speculum is now withdrawn. The cervix is gradually drawn down to the inferior extremity of the vagina. When it has reached this point, another pair of hooks is applied, antero-posteriorly, in order that each part of the surface of the neck may be made to project equally beyond the vulva and the uterus kept steady during the section of the neck. The traction is to be con-

tinued until the cervix projects beyond the vulva. The diseased part is now examined, its extent ascertained, and then cautiously removed by short, sawing strokes of the knife. The position of the operator is between the patient's thighs.

The operation, thus described, is very simple. But the extent and nature of the disease, in some cases, do not allow of its being performed so methodically. A mushroom-vegetation, too large to be embraced by the speculum, may exist upon the neck; or the fungus, though not very voluminous, may be soft, and bleed at the least touch. The effusion of blood renders it impossible to appreciate the state of the parts, which neither sponging nor injections can keep clean. In such cases the use of the speculum is either impossible or unavailable. Instead of Museux's hooks, simple hooks must be substituted, and passed along the finger to the place whereon they are to be fixed. Four single hooks are to be attached to the neck or to the tumor in a similar manner to the double hooks. The operation afterwards proceeds as described above.

If the size of the neck is so considerable as to render its passage from the vagina difficult, and consequently prevent the operator from exposing and removing with certainty the whole extent of the diseased parts, Lisfranc advises to cut the anterior edge of the perinæum, in those cases in which it has a large antero-posterior diameter. It would appear from his memoir that this incision used to be of frequent necessity. But, as no instance of the kind occurred during the three years in which I assisted at all his operations, I

can say nothing of the advantage to be derived from its section.

This operation is by no means very painful. The uterus, though extremely sensitive to even slight pressure, feels scarcely any pain from an incision.

Accidents of the operation ; after-treatment. We shall let the lecturer speak for himself. "A review of the annals of medicine will easily convince any one that, with the exception of plugging and metro-peritonitis, the pathology and therapeutics of the operation have been entirely neglected.

"Surgeons were too much afraid of hemorrhage ; they had recourse almost immediately to plugging, and thus prevented the congested uterus from freeing itself from the blood determined hither by the operation. This powerful cause of inflammation, united to the pain occasioned by the tampon, very frequently excited metro-peritonitis, the termination of which was almost invariably fatal. If the patient has not been exhausted by previous losses of blood, my practice is to allow the hemorrhage to continue — when it does not proceed too rapidly — and not to arrest it, in general, until she has lost from sixteen to twenty-four ounces of blood. By following this principle, I have been obliged to tampon six times only in ninety-nine operations ; and almost always the plug has been put in the lower part of the vagina, and withdrawn at the expiration of one or two hours. I have never lost a patient from hemorrhage, and only three from metro-peritonitis.

"The nervous symptoms, though formidable to surgeons not conversant with them, are not dangerous. After some hours they get quiet ; an antispasmodic draught contributes greatly to this effect.

“The absence or abrupt suppression of the hemorrhage often causes pain in the pelvis. In this case I carefully remove the coagula accumulated in the vagina and throw into it hot emollient injections. If the blood flow anew, the pains ordinarily cease; if they do not, I cover the lower part of the abdomen with a cataplasm, sprinkled with laudanum, and bleed revulsively from the arm to the amount of four ounces. Well marked metro-peritonitis is to be treated by the usual means.

“A small revulsive bleeding from the arm is also the best means of checking the consecutive oozing of blood, which exists with or without uterine spasms. The dietetic treatment is too simple to need comment.

“It is important, as soon as the danger of hemorrhage has passed, to inject gently into the vagina a decoction of marsh-mallows almost cold, for the purpose of washing away the coagula which it contains, for they decompose under these circumstances with great rapidity.

“The wound of the uterus is not in a situation favorable to its prompt cicatrization. 1. It is bathed by fluids which are always more or less irritant; 2. The uterus, being more or less prolapsed, is exposed to contusions; 3. As the organization of the uterus scarcely permits any approximation of the edges of the wound to its centre, a much longer time is required for its cicatrization, in consequence of the necessary formation of a new pellicle over nearly its whole surface.

“Injections, at first emollient and afterwards cicatrizing, absolute repose, and cauterization of the wound with the liquid proto-nitrate acid of mercury, are to be used according to the indications. Six weeks or

two months are necessary for complete cicatrization of the wound.

“The following physiological fact is of the utmost importance; amputation of the neck of the uterus has proved that this portion of the organ is not indispensable to the occurrence and successful termination of gestation at the ordinary period. Parturition is generally facilitated by it. Among ten of my patients who became pregnant, one only aborted, at four months; but she had committed imprudences, which under other circumstances might have produced a similar effect. I will add that Mad. Carpentier has been delivered of two healthy infants, both of whom she carried till term.

“The cicatrix of the wound, occasioned by excision of the cervix, generally has the following characters. At first it is very red; it then becomes white; and at a later period still assumes the color of the surrounding tissues.

“Amongst the great number who have undergone this operation, I know of but one case in which the cicatrix completely closed the inferior orifice of the organ. Menstruation was regular, but preceded and accompanied by strongly marked nervous accidents and by some symptoms of metritis, which were readily subdued. No accumulation of menstrual blood in the uterus, however, ever took place; its secretion was performed by the coats of the vagina. When this patient died, engorged lymphatic ganglia were found in the pelvis and a scrofulous abscess beneath one of the psoas muscles; there was neither metritis nor peritonitis; but it was satisfactorily ascertained that the

inferior orifice of the uterus was completely closed; no suspicion of this fact existed during her life.¹

“The introduction of a probe from time to time into the inferior orifice of the uterus would prevent its closure. Experience will decide whether it could be remedied, after it has taken place, with the trocar or scalpel.

“I may not terminate this memoir without stating to the Academy, that I have amputated the neck of the uterus in *ninety-nine* cases. Of this number *fifteen* died and *eighty-four* have been cured. Among the unsuccessful cases are included those in which the disease returned. I will remark further, that these unsuccessful cases were all in a very advanced stage of disease. There is therefore reason to hope that, in proportion as these new views of uterine disease shall become more general, the chances of success will be still further diminished by operating at an earlier period.” (*Mémoire sur l'Amputation du Col de l'Uterus, par Lisfranc, lu à l'Académie des Sciences, Juin, 1834.*

To these details by Lisfranc we will add a few others. Though consecutive hemorrhage is rare, after the lapse of forty-eight hours, it is prudent to watch the patient for some days. Accidental causes, such as violent emotions, may induce terrific flooding, as was the case with Mad. Colin on the eighth day of the operation.

Cicatrization must be effected as soon as possible

¹ This is the case reported at page 207; Lisfranc did not follow the progress of the disease to its fatal termination; hence the discrepancies in the statements.

after the operation. During the time necessary for this purpose, the wound often exhibits signs of inflammation ; it is important to keep a careful watch over them, as they are frequently the precursors of a return of the disease. At the same time that the edges of the wound are getting hard and callous, the middle becomes of a reddish-brown and is rapidly covered with granulations.

At other times the wound remains pale and colorless ; suppuration is scanty ; and the granulations either have a flabby aspect or none are visible. It is not uncommon to see the wound become covered by ashy-gray tubercles, which grow rapidly and immediately assume a cancerous appearance.

Inflammation is to be treated by emollients and small revulsive bleedings ; the frequency of the latter should be proportioned to the symptoms and the patient's strength. The granulations are to be checked by slight applications of the proto-nitrate acid of mercury. As however it is well known that the effect of a slight cauterization upon excessive granulations is but temporary, and that they often reappear on or about the fourth day with additional luxuriance, a second cauterization is indispensable. In some cases the granulations, after an interval of eight days between two cauterizations, attain such size, as no longer to be within the control of this means.

If the wound remain indolent and stationary, detensive injections may prove useful ; or, which is still better, it may be stimulated by superficial cauterization.

If the vegetations are so luxuriant as to render it

impossible to destroy them by slight cauterization, they may be destroyed by longer application of the caustic, or removed by the *scoop* of Dupuytren, or by long and strong scissors, the points of which are very much bent upon their flat side. This new wound is to be treated like the former. When the vegetations have been left for some time to themselves and have formed a small mushroom-excrecence, the uterus may be drawn down to the vulva by hooks fastened to them, and the amputation repeated. We saw Lisfranc operate in this manner in a case of relapse; the second was not more successful than the first operation.

When the wound has completely cicatrized — if so fortunate a result should perchance happen — the patient must still continue to be watched. Her exercise must be very moderate; diet unstimulating and, in preference, vegetable; and any symptoms of congestion in the pelvis must, in particular, be prevented or assiduously resisted. It is even well to ascertain, from time to time, the state of the wound.

Amputation of the Neck of the Uterus, considered as a means of Cure.

Having now done with excision of the cervix as an operation, it remains for me to determine, *upon the basis of exact facts*, its value as a means of cure. The views which we have just stated are very attractive, but unfortunately are merely the romance of this department of the healing art; in sciences of practical application, results alone give value to theories. My position is a difficult one. I find myself reduced to the alternative, either of disproving the

results announced by Lisfranc, or of being traitor to the cause of science and the interests of humanity — by leaving a large number of my professional brethren in an error, to which they adhere solely from their ignorance of the truth. Whatever may be the issue, a conscientious individual cannot hesitate; personal considerations yield to the interests of science; *magis amica veritas*. I may, in my turn, unintentionally err; but truth is my sole object.

Amputation of the neck of the uterus has, to the present day, been one of the most fatal of surgical operations. To prove this proposition, let us go back to its origin.

Hippocrates had an indistinct idea of the operation; it was recommended by Ambrose Paré; advised in 1780 by Lauvarioli; and formally described by Wrisberg of Milan in 1787 and particularly by Monteggia, in 1788, in a work bearing the title *Annotazioni pratiche sopra gli Mali Venerei*, p. 179 *et supra*.

This little work was translated into German by Dr. Schlessing and became generally known throughout Germany. In it the author, in imitation of the surgeon of Milan, proposes ablation of the neck of the uterus. The operation was performed for the first time, in 1801, by Osiander. Seven years afterwards, the Bulletin of the Royal Society of Göttingen published an account of eight amputations by the same surgeon.

These facts had barely time to become known in France, before Dupuytren adopted the ideas of the professor of Göttingen and submitted them to numerous trials. Recamier soon followed; and in 1815

excision of the cervix had already become a common operation. C. Wenzel and Zang, however, condemned it — basing their objections on pathological anatomy. They maintained that, in cancerous ulceration of the cervix, they had almost uniformly found the body of the organ more or less diseased. They raised their voices in vain against the operation, supported, as it was, both by the charm of novelty and the opinions of Monteggia, Manzoni, Osiander, Baillie, Bayle, &c.

The enthusiastic feeling in favor of this operation insensibly died away; experience taught those, who had been the most extravagant in its praise, that they had counted their successes too early. Osiander, after having performed it twenty-eight times, entirely abandoned it in the latter part of his life. Dupuytren — who had, as it were, naturalized it in France; who, from 1810 to 1820, had been its great partisan; and who owed to it much of his reputation at that time — not only put less confidence in it in the sequel, but finally concluded by its entire rejection.

In 1826, when amputation of the neck had fallen into neglect and surgeons almost generally had ceased to perform it, Lisfranc restored it to greater brilliancy than ever; and it was again recorded on the pages of medical science, as an operation little dangerous in itself and most favorable in its results. Amputation of the neck of the uterus again became the engrossing topic; and the Academy was continually receiving for its inspection the morbid pieces excised.

Other surgeons vainly attempted to imitate Lisfranc's example. They either found their expectations deceived, or else published cases of which the successful

result was merely ephemeral ; that is to say, a month or two after the operation, it was either announced that the wound had cicatrized, or else that there was every reason to hope that the patient would derive permanent benefit from the operation, let the sequel be what it might. Velpeau operated on five patients, lost them all, and renounced the operation. Lisfranc alone remained unshaken amid all these disasters, and, passing from one success to another, in June, 1834, he proclaimed to the scientific world *ninety-nine cases* of amputation of the cervix, *eighty-four* of which had terminated successfully.

As the majority of practitioners of the present day are governed by Lisfranc's results, our attention will be devoted exclusively to them. As, independently of the cases which occurred at the hospital, he never failed to communicate either to his class, or to societies, or to scientific or other journals, those of his private practice, and to enumerate them in the sum total, we are obliged, to avoid error, to pursue our investigations over the same ground.

Fifteen operations only have ever been published, and these are to be found in the theses of former interns of the hospital. They were all performed some time back, when amputation of the neck was in its glory. Of these *fifteen* cases, *three* occurred in private practice and *twelve* at the hospital. Independently of these, I found among the private papers of Lisfranc *eleven* other cases. Of these, ten were operated on at the hospital, and one in the city. *Three* are reported as fatal, leaving *eight* successful cases. As it is very important to know the accidents of which the patients

in these three fatal cases died, I give a brief analysis of them.

CASE I. Death seven days afterwards — earcinomatous masses in the lumbar region — occult cancer of the liver, not discovered before the operation.

CASE II. Death three hours afterwards — section of the attachment of the vagina, at its posterior portion.

CASE III. The report says, *without appreciable cause*. It adds, however, that plugging was necessary, and that the vagina appeared to have been wounded at its posterior portion.

We thus have a sum total of *twenty-three* cases. But of what value, in a scientific point of view, are facts recorded immediately after an operation; especially when it is remarked that of the first fifteen patients, *one* left the hospital twenty-one days, *one* thirty days, *eight* two months, one four months, and one six and a half months, after the operation? Of the three cases which occurred in private practice, one is stated to have been cured in thirty-six days, and two others in two months.

Whilst such brilliant results were obtained at the hospital (*La Pitié*), what were those of Lisfranc's private practice? With the exception of the three successful cases mentioned above, the following are nearly all the operations performed by him in private up to January, 1833. From the most accurate data, communicated to me by his former assistants, I have not been able to make out a single other case, either successful or unsuccessful.

CASE I. Immediate relapse — death shortly afterwards.

CASE II. Immediate relapse — death.

CASE III. Immediate relapse — death shortly afterwards.

CASE IV. Relapse — death six weeks afterwards.

CASE V. Not cured — disease continued — the patient was often visited and cauterized by Beringier.

CASE VI. Perforation of peritoneum at the posterior portion of the vagina — death in forty-six hours.

CASE VII. Relapse — death in seven months.

CASE VIII. Wound never cicatrized — death some months afterwards.

CASE IX. Wound never cicatrized ; fetid discharge continued — death with symptoms of phthisis.

CASE X. Terrific hemorrhage — death in twenty-four hours.

Thus we have here ten unsuccessful cases following each other almost consecutively. I leave to the profession the solution of such conflicting results.

We now come to a period in which there is no obscurity, no uncertainty, and the more valuable because so complete in itself that no doubt can be raised in the reader's mind. During nearly the three years following January, 1833, I was an intern of the hospital *La Pitié* and prosector to Lisfranc. I uniformly assisted him in his operations, and carefully followed the history of each patient to its close. The following is a summary of all the operations during this time, either in private or at the hospital.

In Private Practice.

CASE I. Age 34 years — terrific hemorrhage ; plugging for four hours — nervous accidents, vomiting

for twenty-four hours — immediate relapse — death six months afterwards.

CASE II. Age 51 years — still retained her strength and color and presented all the external appearances of perfect health — neck hard, not knobbed, slightly enlarged ; a slight softening occupied about a line of the tip of the os tincæ ; it was occasioned by superficial ulcers, extending about a line into the interior of the neck ; lancinating pains ; no general symptoms — relapse — death two years afterwards.

CASE III. Age 32 years — had suffered for a long time from red and white fluxes ; pain trifling ; had some color — terrific hemorrhage ; plugging — nervous accidents — death five hours afterwards.

Remarks. In this case a portion of the vagina was removed, upon which a small disc of the peritoneum was visible. I have no doubt but that the peritoneum was opened and that the hemorrhage continued internally, as was plainly indicated by the difficult respiration, horrible pain about the diaphragm, vomiting, and hiccough.

CASE IV. Age 31 years — had never suffered much pain ; very much debilitated by red and white fluxes during two years, which had become more profuse in the second year ; complexion pale merely — fungous mushroom-excrecence — terrific hemorrhage ; plugging for three hours — frequent syncope — immediate relapse — death one year afterwards.

CASE V. Age 35 years — feeble, but suffers little pain ; very pale — terrific hemorrhage ; plugging for two hours — nervous accidents, rigors, vomiting — immediate relapse.

CASE VI. Renewed operation on No. V, five months after the first — fresh relapse — death recently.

CASE VII. Age about 40 years — pale and debilitated by fluxes — os tincae very much developed ; soft ; covered by vegetations not much raised ; no induration at the base of the neck — operation performed fifteen months ago — cure apparently firm.

CASE VIII. Thin ; very nervous ; skin somewhat yellow — had a carcinomatous mushroom-excrescence — operation attempted but given up after the removal, by scissors, of a portion of the carcinomatous vegetation — uterus could not be depressed — death seven months afterwards.

CASE IX. Age about 34 years — had a carcinomatous mushroom-excrescence — slight hemorrhage — portion of the carcinoma left — death imminent.

CASE X. Age about 40 years — terrific hemorrhage ; plugging for three hours — very severe nervous accidents, rigors, vomiting, suffocation, cough, &c. — death twenty-two hours afterwards.

Remarks. The vomiting caused renewal of the hemorrhage at two different times, compelling us again to resort to pressure upon the tampon, which had remained in place. The vomiting could not be arrested ; respiration became more and more embarrassed.

At the Hospital (La Pitié).

CASE XI. Age 35 years — carcinoma not entirely removed — death three months and a half afterwards.

CASE XII. Age 36 years — carcinomatous mushroom-excrescence — no immediate accident — hemor-

rhage ten hours after the operation ; plugging — metritis — death six days afterwards.

CASE XIII. Age 35 years — still preserved her flesh and strength — terrific hemorrhage arrested by plugging — nervous accidents, severe pain in the abdomen, respiration embarrassed — death in twenty-four hours after the operation.

Remarks. — On examination we found an opening into the peritoneum, as large as a dime. It had the appearance of being a laceration occasioned by the force used in plugging. The mucous membrane of the vagina seemed to have been removed, but the knife had failed to open the peritoneum.

CASE XIV. Age 27 years — delivered some months previously — had a fungous mushroom-excrecence of considerable size, but yet limited and capable of removal — attempt at amputation — depression of the uterus impossible ; operation abandoned — death five months afterwards.

Thus, within three years, *fourteen* operations have either been performed or attempted in which I have participated. Nine of these were complete ; that is to say, the operation was regular and the carcinoma entirely removed. Of these nine, *three* died within *twenty-four hours* ; a *fourth* in *six days* ; *four* immediately relapsed, one of them, who has recently died, twice. One only enjoys a probable chance of life. In *three* others, the operation was incomplete — a portion of the disease having been left behind ; in the last, it was impossible. Although the operation was not finished in this last case, that is no reason why it should

be omitted from the number. The hooks were fastened upon the neck and traction made for ten minutes, to draw the uterus down to the vulva. The violence of these acts must necessarily have precipitated the patient's death. It will certainly be conceded that the impossibility of continuing an operation ought to be set down as one of the causes of failure of the operation itself; for, if it were possible to foresee this result, I should be justified in asking why those useless or rather fatal attempts were made in CASES VIII, IX, XI, and XIV.

These results are very different from those stated in the Memoir by Lisfranc, and yet the operator is the same in both cases.

Whence, indeed, should arise the success of Lisfranc at a time when the most distinguished surgeons met with reverses only? Were these results dependent upon his mode of operating? The operation can, undoubtedly, be performed with more safety to the patient and with more certainty of removing the whole disease, by drawing the uterus down to the vulva; but Osiander operated thus, and finally abandoned the operation altogether; Velpeau depressed the uterus, and yet was uniformly unsuccessful.

Lisfranc attributes his success to his knowledge of the manner in which the vagina is attached to the cervix — an anatomical peculiarity of which he claims to be the discoverer. His description of the insertion of the vagina, however, is only in part correct. Its insertion in front has a mean breadth of not more than two and a half lines, and is moreover separated by a vacant space from the peritoneum; so that a portion

of its thickness can be removed in this direction without wounding the peritoneum. Not so behind however; there, the attachment is just the thickness of the vagina and the peritoneum is in close contact with it.

The sign indicated by Lisfranc, as a means of ascertaining the breadth of the vaginal insertion, is unfortunately altogether ideal. In all the operations at which I have assisted, all that could be done was to ascertain the origin of the vagina, so as not to carry the knife above it; and yet, in despite of every precaution, we see that the peritoneum was several times opened behind, where, as I have first stated, they are in close proximity.

And if this happens to Lisfranc, whose name is, as it were, identified with the operation, what may not be feared from it in hands less skilful and less practised! It is not one of the least dangers of the operation. So sensible is he of this, that if hemorrhage commences after an operation, which has been attended by the slightest difficulty, he immediately causes a disc of agaric to be placed in the fundus of the vagina, with the view of preventing effusion of blood into the abdomen.

Nervous accidents are not necessarily connected with section of the cervix. I have never seen them except as the result of severe hemorrhage; they are entirely or almost entirely wanting when it does not occur. They are therefore dependent upon the hemorrhage, which of itself explains the dreadful symptoms previously detailed.

Notwithstanding Lisfranc's assertions "*that he has been obliged to resort to plugging six times only in*

ninety-nine cases” and “*has never lost one patient by hemorrhage,*” such is his fear of its occurrence, that during the last three years he caused me to introduce the tampon, even whilst the patient was on the operating table, if the loss of blood was in any considerable quantity.

Hemorrhage is not so rare as is generally supposed, nor so easily arrested as is asserted.

Generally, when the patient is feeble and her integuments flaccid, soft, and discolored; when she has been exhausted by previous fluxes, whether white or red, it requires much care to suppress hemorrhage; the blood, being almost entirely destitute of fibrine, coagulates with difficulty.

The most accurate plugging, aided by compression with the hand, is far from arresting the hemorrhage instantly. The loss of blood is accompanied by nervous symptoms; at each effort of vomiting, the tampon is violently ejected and allows a quantity of blood, either larger or smaller, to escape along the walls of the vagina. Even after the hemorrhage has ceased for one, two, or three hours, and the assistant has withdrawn his hand, a fresh attack of vomiting or coughing is sufficient to renew it and the necessity of compression.

Moreover, compressed plugging is dreadfully painful and creates a state of inexpressible anguish. In the next place, it is not always safe. The uterus is crowded inward, the wound compressed, and the vagina distended by the pressure, which is more or less forcible and often continued for two or three hours. In consequence of the distension of the vagina, it be-

comes necessary to make continual additions to the mass already introduced, otherwise, the blood escapes along its walls. Finally, the vagina may be lacerated by it. This accident happens the more easily, because its insertion upon the neck of the uterus after the operation is often left very thin and incapable of much resistance. CASE XIII is an instance of the kind.

Having become convinced of the insufficiency and danger of this method, he afterwards suspended the operation, as soon as an arterial jet took place, in order that I might either tie or twist the vessel. This can be done however, only when it is possible to draw the uterus down to the vulva.

In 1835, a *concours* was held at the Institute for the purpose of filling the place left vacant by the death of Dupuytren. Lisfranc presented his operation of amputation of the neck of the uterus as one of his strongest claims. The distinguished members of the society asked for a list of patients operated on and cured, for proofs a little more conclusive and positive than a mere abstract number. I was employed by Lisfranc to look up the cases. In pursuance of this object I consulted the theses of his former interns and his own private papers; but the number of facts found was very small in proportion to the eighty-four successful cases announced.

A list however was prepared and deposited at the Institute; it consists of two series of facts. The first includes amputations of the neck, properly so called, and comprises the *twenty-three* cases formerly mentioned as published in different theses, and found among his own private papers. The second is entitled *Mixed*

Operations, or operations in which a portion only of the carcinoma was removed by the knife, the remainder having been destroyed by caustic. This series consists of *twenty-five* cases.

As most of the facts which follow will need some explanation, I shall arrange them in two columns; the first is a copy of the list deposited with the Institute; the second contains remarks by myself.

LIST OF (PRETENDED) SUCCESSFUL OPERATIONS.

CASES.	REMARKS.
1. Twins since — two single pregnancies at term.	} Counted twice.
2.	
3.	See No. 5.
4.	Real operation, in 1832.
5.	Unknown to the different assistants of Lisfranc.
6.	Counted twice — same as No. 2.
7.	Mistake — no member in this family ever underwent the operation.
8.	Real success.
9.	Unknown to former assistants and also to the occupant of the house, who has resided in it for thirty years.
10.	Mistake — twice delivered by Carron du Villards, and has never undergone the operation.
11.	No data.
12.	Mistake — merely cauterized for excoriations on the cervix.
13.	No data — unknown to former assistants.
14. Operated on at an invalid establishment.	Mistake — had excoriations on neck of uterus — was attended by Carron du Villards.
15.	} This case seems to be the same as one of those found among the papers of Lisfranc, no other of the same name having been at the establishment.
	Unknown to different assistants of Lisfranc.

CASES.	REMARKS.
16.	Mistake — same as case vii. p. 361 — died from a return of the disease.
17.	No data — unknown to former assistants.
18.	Mistake — same as case ix. p. 361 — died from a return of the disease.
19.	Mistake — never operated upon; was attended for six months by Carron du Villards.
20.	Mistake — I assisted Lisfranc in removing a polypus situated between the lips of the os tinæ.
21.	Same as case vii. p. 363 — the 84 successful cases occurred previously to June, 1831; and this operation was not performed till the following September.
22.	Mistake — I assisted in the removal of a small fibrous polypus situated in the fundus of the uterus.
23.	Merely alluded to in one of the theses.

With respect to the second series, or *Mixed Operations*, I will merely observe that Lisfranc not only does not perform them, but earnestly denounces this mode of operating. For the truth of this assertion I appeal to all surgeons who have ever been present at his operations and to all his prosectors. Moreover, three of these very cases are published in one of the theses; and any one can convince himself that these patients did not undergo the operation. But, even if these mixed operations had actually taken place, they cannot be considered as amputations of the neck, properly so called.

There is one name familiar to all who are accustomed to visit *La Pitié*; for the name of Madam Carpentier, (Case 1. page 369,) has been daily repeated within its amphitheatre ever since 1828. She consti-

tutes the living glory of amputation of the neck of the uterus, having given birth since the operation to four children, two of whom were twins.

The nature and extent of the disease, under which she labored, is thus stated in the thesis of Mury, who at that time was prosecutor to Lisfranc; "considerable tumefaction around the orifice of the neck; an ulcer, on the lips of the os tinæ, of some lines in dimension, and surrounded by vegetations." In truth, it requires a little complaisance to see any thing in this description which could render amputation necessary. The treatment adopted is thus stated by the same writer; "at this time (Dec., 1825) the cervix is swollen; its lips are red and bleeding. Cataplasms and antiphlogistics are prescribed. The disease, notwithstanding, progresses; an operation is soon proposed and accepted by the patient."

For my own part, I see in this case a slight affection merely, limited to the extremity of the os tinæ; and I am convinced that the diseased portion might have been excised without removing scarcely any of the neck itself, that is to say, of its body, its constituent part. It is rational to conclude that the larger portion of it must have been left with Madam Carpentier, to assist in gestation of the children to whom she afterwards gave birth.

This case therefore, as I think, was nothing more than simple excision of the os tinæ, for a disease whose nature was in the highest degree favorable to an operation.

In those cases in which pregnancy has taken place after the operation, it is probable that the section has

not included much more than the os tinæ. This organ may degenerate into an enormous mass of vegetations, without its body being scarcely at all involved. In ablation of such a tumor, a surgeon might really believe that he was removing the larger part of the neck, whilst he has, unconsciously, been fortunate enough to leave it with his patient.

Carron du Villards had an opportunity of delivering a woman who had undergone this operation. He assured me that, both during pregnancy and labor, he was able to follow the dilatation of the neck exactly as in ordinary cases; nothing was wanting to the organ but its inferior extremity, formed by the os tinæ.

We draw then the following conclusions;

1. The number of *ninety-nine* operations, performed previously to June, 1834, does not appear to be very accurate; for up to Jan., 1836, counting all the facts proved to be real, and including some unsuccessful cases which were hushed up, we can make out only a sum total of *fifty-three* operations.

2. We are without details, or rather any certain data, as to the unsuccessful cases in the hospital.

3. Of the nineteen patients operated on in private, whom we have mentioned, one alone has derived any permanent benefit from the operation.

4. Of the same *nineteen*, *four* died in the *twenty-four* hours; *twelve* of immediate relapse; and with the remaining two, in whom a portion of the carcinoma was left, the disease progressed with additional activity.

5. Of the nine patients on whom the operation was

complete and with whom I remained *twenty-four* hours, *six* were attacked by terrific hemorrhage, and *three* of them died within the *twenty-four* hours.

I have entered into all these details upon appreciation of excision of the cervix with the sole view of enlightening my professional brethren, who could not possibly acquire a knowledge of the facts by themselves. My exposition may be of utility to them.

Is amputation of the cervix to be proscribed forever? I have nothing to say with respect to the operation as to the future; my sole object has been to exhibit its present condition; the materials in my possession were due to science, and into her hands I have hastened to surrender them.

II. EXTIRPATION OF THE UTERUS.

Unlike amputation of the cervix, this operation is not only painful to the patient, but truly formidable to the surgeon. From this remark we may except those cases in which it is already half done, by the descent of the uterus beyond the vulva and its isolation from those parts with which it is usually, in its normal state, in relation; and by which, consequently, its entire removal will not be felt. In these cases it is an easy operation, and not attended by much pain. Some instances of its successful termination are well authenticated.

The modes of operation vary according as the uterus has prolapsed beyond the vulva, or can, from the laxity of its ligaments, be drawn to that point by slow and graduated traction, or according as it is immovably fixed in the pelvis.

Extirpation of the uterus, beyond the vulva, has been performed,

1. *By tearing the organ away by main violence.* — Cases are recorded in which the patients have survived. It is not however an operation which we can recommend.

2. *By ligature.* — The vaginal pedicle is surrounded by a single ligature; or a double ligature is passed through its middle, as is done by Recamier, and then tied on each side. The latter mode is less painful than the former; and, moreover, the ligature is less likely to slip off when the pedicle is excised.

3. *By ligature and section.* — After application of the ligature, the great majority of surgeons have left the organ to fall of itself; but the unfavorable effects, occasioned by the putrefaction of the strangulated portion, induced Windsor in England and Recamier in France to remove by excision all the parts below the ligature.

4. *By excision.* — This mode of operating is very simple. It consists merely of a transverse section of the kind of pedicle formed above the uterus. The great danger of the operation arises not so much from hemorrhage, as from the access of air to the abdominal cavity, through the large opening made by the ablation of the uterus, and the consequent supervention of peritonitis. Wolff, of Hanover, vainly attempted to prevent this accident by closing the wound with a suture. His patient died, within forty-eight hours, of double inflammation of the peritoneum and pleura.

The operation by ligature, followed by section of the strangled portion, is certainly preferable to either of

the others, although it may induce very severe inflammatory symptoms.

Extirpation of the uterus, in place, is performed in three different ways. 1. By the hypogastric method; 2. By the vaginal method; 3. By the method of Dubled. Of twenty-one patients, within the last twenty years, who have undergone the operation — either whilst the uterus remained in place or was drawn down beyond the vulva — eighteen died immediately, either from peritonitis or hemorrhage. The three others, who escaped these first dangers, continued to languish in a feeble state for some time, and finally died. Thus, out of the whole number, there is not one instance of permanent cure. But, where the operation has been performed on an accidentally prolapsed uterus, the individuals have survived many years. It may therefore be considered as an act of prudence to discard this operation entirely, inasmuch as it fulfils neither of the objects of operative surgery — to save or to prolong life.¹

¹ This chapter has been considerably condensed, by leaving out, in this division of it, descriptions, with cases, of various modes of extirpating the uterus in place; they seemed superfluous in a work of this character. Certain details in the preceding division, which were not necessary either to its unity or completeness, have also been omitted. TR.

CHAPTER V.

FOREIGN BODIES ATTACHED TO THE UTERUS OR DEVELOPED IN ITS VICINITY.

TUMORS in the vicinity of the uterus have their special and separate indications. They are wholly disconnected with our present subject, except that they may, by their volume, alter more or less the form of the uterus and push the organ from its normal position. In the second place, the irritation, which has been kept up by them in the pelvis, for a longer or a shorter time, usually increases the size of the uterus, as is observed in extra-uterine pregnancy. Therefore, after their removal when possible, and even during their presence in the pelvis, it is the advice of Lisfranc never to lose sight of the probable engorgement of the uterus.

We shall now speak of a peculiar tumor of the uterus and of uterine polypi.

I. A PECULIAR TUMOR OF THE UTERUS.

A tumor is occasionally formed in the parenchyma of the uterus, whose nature is generally little known, but which is deserving of attention. Its most common situation is the lower portion of the posterior ute-

rine wall. On passing the finger through the neck — which is now habitually dilated — into the cavity of the uterus, a raised and rounded tumor is felt, one half of which is imbedded in the wall of the uterus; its diameter varies from that of a quarter to that of a whole dollar; its outline can be more or less distinctly felt. To the touch, it has neither the softness of the vesicular, nor the hardness of the fibrous polypus; it is sometimes insensible; at others, more or less tender. Its form is usually the same; in one case alone Lisfranc found it to resemble a cock's spur. The rest of the organ is generally healthy.

It is quite difficult to determine the nature of this tumor with any precision, during life. Is it carcinomatous; or the result of partial inflammation of the uterus; or a white, indurated and scirrhus point; a polypus; a cyst; a cartilaginous or cretaceous concretion? Pathological anatomy has demonstrated the occasional existence, in the uterus, of all these different productions; it is therefore impossible to distinguish them, by the touch, with any certainty.

Lisfranc derives the indications of treatment here, as elsewhere, from his usual fundamental principles. If sub-inflammation exist, it must be subdued by the measures precedingly detailed; if it do not exist or has been removed, resolvents are indicated. If the tumor should happen to be tuberculous, it would at first require no other treatment; afterwards, if its progress leave no doubt as to its nature, the treatment should conform to the principles laid down in treating of this kind of disease.

These tumors have been considered as necessarily

fatal ; I differ, says Lisfranc, from this opinion ; a great number of tumors of a similar kind have come under my care ; and, by arresting the inflammation, their degeneration has been prevented. Sometimes they entirely disappear ; at others they become small, indolent, and have no effect upon the general health. They however still retain for a long time a disposition to renew their irritation.

II. UTERINE POLYPI.

The history of uterine polypi is better understood than that of other diseases of the uterus. Lisfranc therefore confines himself to certain points less known, or even altogether new.

The two most frequent varieties of the disease are the *cellulo-vascular* and the *fibrous* polypi.

1. *Cellulo-vascular polypi*. — They are usually found at the inferior portion of the uterine neck, between its two labia, and at the lower part of the cavity of the uterus. Ordinarily of no great size, simple or multiple, they are sometimes immovable, with a broad base, and resemble granulations. Most frequently, they are pendent from a pedicle of greater or less length. If, in the last case, the pedicle be attached above the neck, it is quite difficult to discover the tumor by the touch, for it retreats before the pressure of the finger into the cavity of the uterus ; but as the dilatation of the neck, in such cases, is usually sufficient to allow the finger to pass through it, the examination should be pushed even into the uterine cavity.

When the polypus is seated near the os tincæ and

is of no great size, very soft, and not pediculated, it flattens beneath the finger passing perpendicularly over it and lies close to the tissue of the uterus, and thus escapes discovery. The finger must therefore be made to traverse the neck transversely; in this direction it meets with a slight elevation, a small projecting body, which can be lifted up and moved from side to side.

“Cellular and vascular polypi are attended by symptoms analogous to those of cancer of the neck. In consequence of their diminutive size, they escape the most careful examination, and are the despair not less of physicians than of patients. The symptoms are red or white discharges, commonly accompanied by a sense of fatigue in the loins, dragging pains in the groins, weight upon the fundament; and physical and moral exhaustion rapidly induced by hemorrhage and pain. The hemorrhage, and more particularly the white discharge, takes place from the lightest touch, from coition, from the approach of the catamenia. Finally, the tumors themselves are easily discovered by the touch and speculum. On passing the finger around and within the circle formed by the os tincæ, it meets with one, two, three, or more small, elongated, pediculated bodies, implanted on the inferior extremity of the cavity of the neck. Their size varies from that of a pea to that of a kidney-bean. The least touch causes them to bleed. If the speculum be employed, the neck and os tincæ are seen to be red, dilated, and filled by small, reddish, elongated, pediculated bodies, attached to the neck. There is no disease with which this affection has not been confounded.” (*Bulletin des Sciences Générales*. 1827.)

If left to itself, the consequences of this disease may be very formidable. As the polypi increase in size, they frequently also become less vascular, and are gradually converted into a fibrous tissue. Frequent examination of morbid specimens has convinced us of this anatomical fact. It is manifested, more especially, upon small polypi having an elongated pedicle; though their tissue is still cellular and vascular at their origin, it is seen to become whiter in proportion to its distance from their attachment, and finally to terminate in a small fibrous knob.

Lisfranc removes them by a process composed of pulling and twisting. Having introduced the speculum and wiped the parts clean, he seizes the polypus with a pair of long forceps, twists it around many times, and then plucks it off; the uterus remains in place the while, and the operation is performed through the speculum. The only requisite precaution is to push the bite of the instrument, a little opened, down to the very root of the pedicle, in order to be more certain of extirpating the whole disease, which we may be assured of having done, when we can feel a slight depression in the spot from which the pedicle originated.

This simple operation however does not terminate the treatment. In the first place, polypi are frequently accompanied by hypertrophy or œdema of the neck, and even by engorgement of the entire organ. The removal of this pathological state should be attempted by means which we have described; the engorgement or the œdema will yield the more easily now that their cause is destroyed.

In the second place, the wound occasioned by the operation is a new cause of irritation to the already affected organ. If left to itself, its cicatrization is not certain; it may become an ulcer. A woman of Sens had been operated on by Recamier; on the third day, thinking herself cured, she dispensed with his attendance. Shortly afterwards, she had some uneasiness about the pelvis and a quite profuse leucorrhœal discharge. As these symptoms increased, she was induced to call upon Lisfranc. He found upon the neck a simple, isolated ulcer, with a depression in its centre; it had apparently followed ablation of the polypus. It was cauterized twice, at an interval of eight days. She afterwards applied to me; and I terminated the cure by four cauterizations. Fifteen months have now elapsed, and, on a recent visit of the lady to Paris, I found the parts perfectly healthy.

Eight or ten days after the operation, it is proper to examine the state of the wound, which we should endeavor to make cicatrize as rapidly as possible. If the granulations are excessive, they should be checked by cauterization about every fourth day; if the surface of the ulcer look pale and do not heal, it may be stimulated by a superficial application of caustic.

2. *Fibrous polypi*.—When the pedicle of these tumors is very slender, Lisfranc removes them by torsion; with the exception of these cases, and they are quite rare, he prefers excision.

To ensure greater safety in operating by excision, the uterus must be brought down as near as possible to the vulva. For this purpose, the polypus is seized either with simple hooks or the hooks of Museux, ac-

according to the pathological character of the tumor, care being taken to fix them upon tissues firm enough to hold. The finger, if necessary, is then carried to the root of the pedicle, and upon it is passed a pair of scissors curved upon their flat side, with which the section can usually be made. The uterus is generally low enough, if the polypus is drawn without the vulva; for this purpose slight traction is sufficient.

When the pedicle is implanted very high up in the uterus, and its insertion cannot be reached on account of the moderate dilatation of the neck, we may try to semi-introvert the organ; if we cannot succeed, like Dupuytren, in this, the neck may be laid open by incision from without inwards, or the reverse.

If the size of the polypus be such as to obstruct its passage through the vulva, its removal may be facilitated by an incision through the fourchette; or by lessening the diameter of the tumor by compression; or by breaking it up by the hooks; or cutting off portions with the scalpel. Not long ago Chassaignac conceived the happy idea of removing a large portion of the polypus in the form of a wedge; this ingenious method succeeds perfectly.

Nevertheless, the size of the tumor must be truly extraordinary to be unable to pass through the vulva, when we take into consideration its extreme dilatability. In effecting its passage, the traction must be slow, gradual, and continued for ten and even fifteen minutes. In this manner a fibrous polypus was extracted at *La Pitié*; it was attached to the interior of the neck and filled the vagina—its diameter being nearly equal to that of a child's head at term. I pulled

upon the tumor, whilst Lisfranc, by means of two fingers in the rectum, formed an inclined plane, by which its exit was much facilitated. As soon as the large diameter of the polypus reaches the vulva, the traction must be almost entirely discontinued ; for the rapidity with which the tumor issues forth might either lacerate a slender pedicle or draw down the uterus itself.

The polypus is sometimes very soft ; it either tears away from the hooks intended to drag it outwardly, or else its pedicle does not apparently offer sufficient resistance. In this difficulty, Lisfranc fixes the hooks, not into the tumor, but into the neck. He says that the fear of a few punctures made by them is altogether groundless. The application of leeches to the neck is known to be unaccompanied by pain, and even its section is scarcely felt — its sensibility seeming to be greatly excited only by pressure.

At page 84, I cited a case in which this course was pursued. Shortly afterwards, in 1833, I assisted Lisfranc in operating upon the sister of an officer of the garrison of Paris. She had two polypi attached, side by side, to the cavity of the uterus, half an inch above the os tincæ. One was of the size of a large walnut ; the other was of an elongate, flattened shape, and attached by a very slender pedicle, which passed over the surface of the first. He seized the larger of the two with Museux's hooks and drew it to the vulva ; and then passed a pair of curved scissors to the attachment of the pedicles, thinking to cut them both at one stroke. The attempt was unsuccessful, the first polypus only having been excised ; the other ascended

with the uterus into the pelvis. As the slenderness of its pedicle precluded the idea of seizing it with the hooks, they were fixed upon the neck; the uterus was again drawn down to the vulva, and the polypus excised; in three days the patient was able to walk out.

When the tumor is brought down to the vulva, it is essential, previously to its excision, to examine well the place of its attachment, and distinguish it carefully from the substance of the uterus itself. This examination cannot be conducted with too much care and precision. The principal point of the diagnosis—which deserves all the importance attached to it by Dubois—is to ascertain the situation and state of the circular pouch which separates the neck from the vagina; the finger passes thence to the neck itself, ascertains its central orifice and the relative position of the lips of the *os tincæ*, and determines whether they merely give passage to the pedicle of the polypus, or whether it is implanted upon a larger or smaller portion of their circumference. This done, it is even well to take the precaution of ascertaining the existence of the uterus above the foreign body, by feeling above the neck and, if necessary, touching per rectum.

It was undoubtedly from neglect of some of these points that Paletta and Monteggia extirpated an uterus, thinking the while that it was a polypus; and, on the contrary, that Cloquet and Richerand removed a polypus which they had mistaken for the uterus.

Dupuytren once, when touching, discovered a polypus attached to the anterior lip of the neck by a broad and short pedicle; he drew the tumor externally, for the purpose of excising it; when it came into sight,

however, it had so much the aspect of the uterus, that he thought proper to remove any uncertainty as to its nature by a tentative incision into its centre.

Now, in the first place, the posterior lip of the os tincæ was free; and, in the second, if the presence of the body of the uterus above the polypus had been ascertained with certainty, it would have removed the necessity of an experimental incision, which, if actually made into the uterus, would not probably have been exempt from danger.

Since men of such distinguished reputation have been uncertain as to the nature of the tumor, it is therefore to be presumed that the avoidance of mistake is not uniformly easy.

If the size of the tumor, whilst it still remains in the pelvis, will admit the passage of the finger, the neck should be carefully examined, as we have described, and the vaginal commissure again ascertained, to prevent the possibility of mistaking a polypus for carcinomatous developement of one of the labia of the os tincæ.

In 1834, Lisfranc operated on Madam Delaroue; there were present Vigny, Barthe, and myself. The patient, who was about forty-five years of age, had been much reduced by hemorrhage and very severe lancinating pains. A conoid, indurated, fragile tumor, of the size of a small walnut, was discovered by touching at the extremity of the vagina; it was incorporated with the anterior lip and appeared to be attached to the vesico-vaginal partition, which was likewise indurated; it was contracted as it approached the partition. The tumor, from its inclination forwards and downwards,

it concealed the entrance to the uterus. Lisfranc believed it to be a polypus; but, as he was not positive, he determined to apply a ligature to it in place, without once thinking either of its depression or excision.

The patient being properly placed, whilst the operator was endeavoring to circumscribe the polypus with his finger, in order to ascertain the exact point on which to apply his ligature, it gave way, was torn off, and brought with it the corresponding portion of the diseased vesico-vaginal partition. On the removal of the tumor, it was easy to ascertain that the remainder of the neck was destroyed, and the entrance to the uterus studded by carcinomatous asperities.

As it may be supposed, the symptoms continued, with the additional aggravation of a fistula, until the death of the patient, which occurred shortly afterwards.

Fibrous polypi, which have descended into the vagina, do not generally indicate their presence by symptoms different from those described in our chapter of general remarks, except that the most common symptoms are very profuse hemorrhage and leucorrhœa. It is the same with polypi contained in the cavity of the uterus, as long as they remain small; but when from their size they dilate the uterus, it is not uncommon to see pains as of parturition supervene; if they persist, they are an almost certain sign of the existence of a foreign body developed in the organ. When, after having lasted for a longer or shorter time, they cease and do not reappear, there is reason to believe that the body of the polypus has been expelled from the uterine cavity, with which it is connected now merely by its pedicle.

Even when the polypus is still in the cavity of the uterus, its excision is preferable whenever possible; that is to say, when the neck is partially open, which is generally the case, and when the enormous size of the polypus does not render it impossible to pass a cutting instrument down to its pedicle.

Hemorrhage, after section of a polypus, is of such rare occurrence that it cannot be considered as a contra-indication, though it has been urged as an objection against this mode of operating. It has never occurred in Lisfranc's experience. On one occasion only, a pretty profuse hemorrhage ensued some hours after the operation, but was checked by the simple tampon. This hemorrhage, however, could not in truth be attributed to section of the pedicle, because it showed no sign of vessels capable of bleeding. The danger besides, when it occurs, is easily averted.

Nevertheless, if the patient were exsanguine to such a degree as to render the smallest loss of blood dangerous; if the uterus were very much dilated or susceptible of great dilatation, as after child-birth, Lisfranc considers the ligature preferable. It was in this manner that he removed the fragment of a placenta, (page 84), which, from its adhesion, required the same management as a fibrous polypus.

The preference given to section in ordinary cases is fully justified by the structural peculiarities of this kind of tumor. The pedicle is generally formed by a layer, more or less thick, of the tissue composing the internal wall of the uterus, which is expanded over the fibrous body and covers it like a sheath. It is

possible, therefore, that the action of the ligature upon the very tissue of the uterus may excite more severe inflammatory symptoms than excision. In the second place, excision prevents those fetid discharges which the ligature occasions until the strangled parts drop off, and which are often detrimental to the patient's constitution.

This peculiarity of organization is also a reason why—even when the ligature or knife cannot be applied to the very origin of the pedicle—the operation should not be abandoned. All of the tumor that is within reach having been removed, the remainder will fall off or suppurate away; the flaps of the enveloping membrane will either retract or else be also removed by suppuration. Nevertheless, when adhesions have formed between the fibrous body and the envelope-membrane of its pedicle, the remaining portion will continue to live—if any vascular communication exist—and render another operation necessary. Recamier and Herbiniaux report cases which corroborate this latter remark.

In two cases in which I assisted Lisfranc, the ligature did not include more than two thirds of the total length of an uterine polypus. The cure, however, was as complete as though it had acted upon the pedicle itself—the portion not included having been perfectly removed by suppuration.

The following fact is very interesting from its details. It was published by me, in 1834, in the *Gazette Médicale*. The polypus was attached to the fundus of the uterus and could only be removed in part; the cure however was not the less complete.

Madam Klet, forty years of age, began to experience, eighteen months ago, a sense of weight in the pelvis and dragging pains in the loins. The catamenia were not at first deranged otherwise than in being attended by unusual pain; ultimately, a leucorrhœal discharge commenced. The symptoms continued gradually to increase. Four months ago, quite severe pains commenced in the pelvis and extended to the lower extremities; there was an almost constant flow of blood; the uterine pains assumed the character of labor-pains; the strength diminished; the complexion took a yellowish tinge; and loss of appetite and sleeplessness soon completed her exhaustion. In this state she placed herself under the charge of Cosson, who, having discovered the cause of the accidents, desired the attendance of Lisfranc.

Examination by touch easily detected the presence of a polypus, nearly as large as a hen's egg; it was still in the uterus, at about an inch above the os tincæ. The neck of the uterus was swollen, and its orifice sufficiently dilated to allow the introduction of one or two fingers. The tumor was hard to the touch; its pedicle could be easily reached on the right and in front; but on the left and behind, it was entirely out of reach.

The condition of the patient rendered its ablation indispensable; but Lisfranc thought it expedient to subject her, previously to the operation, to a preparatory treatment consisting of injections, general bathing, and emollient enemata, assisted by repose and a diet composed principally of white and easily digestible meats. Its effect was so favorable that, during the

fortnight which preceded the operation, the hemorrhage ceased, the pain diminished, and the patient regained a little strength.

The operation was performed in presence of the patient's physician. The seat and height of the polypus being well ascertained, it was decided to draw the uterus down to the vulva, by means of hooks fixed upon the neck, and to make a first trial with the ligature.

The patient having been placed, as for the operation of lithotomy, upon a bureau on which was laid a mattress, the speculum was introduced, the neck exposed, and its anterior lip seized by Museux's hooks; it was then withdrawn. Scarcely any pain was occasioned by this step of the operation. The hooks were then drawn slowly towards the vulva, at the same time that an aid made pressure upon the hypogastrium. In less than two minutes, the anterior lip was brought to the very edge of the vagina; it was pale, thick, and very firm. The posterior lip not having descended with it, Lisfranc seized it with a common hook, by which it was brought down as low as the other.

On passing the finger into the uterus, it was discovered that the traction upon the neck had acted scarcely at all upon the rest of the organ, and that the polypus was situated as high up as before. Lisfranc endeavored to pass a silver wire around its pedicle, by means of Levret's instrument, but without success. He even seized the polypus with a hook to bring it down to the vulva; but it stretched, and the application of the ligature was not at all facilitated. Twice however the loop was thought to be fixed, but, upon tightening the ends of it, it was either found not in a suitable place

or else the wire broke. Another attempt, with the instrument of Desault, was equally unsuccessful.

Under these circumstances Lisfranc, considering the application of a ligature impracticable, determined to try excision. The polypus was drawn down so as to be visible at the vulva ; but the only side of its pedicle which could be reached by the finger was more than two inches distant. By means of the scissors and scalpel, the operator succeeded in removing a portion of the tumor, presumed to be equal to one half its bulk, that is to say, somewhat bigger than the moiety of an egg. Some smaller pieces were also removed by clipping with the scissors. As the finger could not reach the left side of the pedicle of the polypus, the operation terminated — it being supposed that the remnant of the tumor would be removed by suppuration. The whole operation lasted more than an hour. During this time a little serous blood only had been lost. The severest pain was occasioned by dragging down the uterus.

The patient was carried to bed. After a few moments of repose, the abdomen was examined ; there was slight tenderness on pressure ; with this exception, there was no pain other than a dull one in the hypogastrium, which extended upwards to the loins. Six ounces of blood were immediately taken from the arm, and I was left to watch by her in case of any sudden accident — *a solution of gum Arabic, sweetened with sirup of the same ; a sedative draught ; cataplasm of rice and laudanum upon the hypogastrium, to be renewed every three hours ; emollient enemata ; strict diet.*

Six hours after the first bleeding, four ounces more

of blood were withdrawn. The abdomen was painful and swollen by flatus, the discharge of which relieved the pain. A sanguinolent serum was flowing from the vagina; the patient urinated twice; and at each time ejected a small coagulum of blood, which had formed in the vagina. In the evening, the pulse gave 110 pulsations.

The patient passed a pretty good night — slept about two hours. On the second day, the pulse did not exceed 86 pulsations; abdomen not painful. The same treatment was continued for three days; at the expiration of this time she was allowed chicken broth; and, by degrees, resumed her usual diet. On the second day, fragments of the tumor began to come away with the vaginal discharge, which had become fetid. On the 16th day after the operation, the fetidness of the discharge had disappeared; the patient could sit up without pain or hemorrhage. On the 17th, the womb had nearly returned to its ordinary size; the neck was engorged, and still sufficiently open to allow the finger to pass through it; nothing anormal could be detected in the cavity of the uterus. The leucorrhœa continued, though in small quantity and merely containing a few fibres of the polypus. On the next day, she was able to walk about; no pain remained, but merely a little weight in the pelvis.

We have just seen that Lisfranc seized the neck in the first place, to draw down the uterus, and afterwards the polypus itself, in order to bring its pedicle within reach of his finger. The latter step of the operation is however useless when the tumor in the uterus is not of large size. Thus in the case of one

patient, the uterus having been drawn down and its neck held open by means of two hooks, Lisfranc easily removed, by means of scissors bent upon their flat side, a small polypus seated in the fundus of the uterus.

If the passage of the neck be so narrow as to embarrass the surgeon's movements, it may be enlarged in the manner previously mentioned.

When the polypus is found to be hard and resisting, the tractions should be made upon it in preference to the neck. But as introversion of the uterine wall in a greater or less degree may be thus produced, the operator, if he find any difficulty in distinguishing the pedicle from the tissue of the uterus, should prudently cut through merely the envelope-membrane at some distance from the pedicle, and then, with his fingers, enucleate the fibrous body.

If the ligature be preferred to excision, an endeavor should be made to draw down the uterus, in the manner stated. The point, at which the knot-tier (*serre-nœud*) may be most properly applied, varies according to the disposition of the pedicle. If, for example, Lisfranc is operating, by ligature, upon a polypus having a broad base and implanted in the fundus of the uterus, he places his knot-tier behind; and the loop of the ligature uniformly slips over the superior face of the tumor, forming an inclined plane. He then reverses his steps; the knot-tier is now brought in front and maintains the ligature in place, the loop of which, being carried behind, tends on the contrary to rise higher and enclose the pedicle nearer to the uterus. The manœuvre thus modified is readily executed.

Other surgeons had previously recommended placing the knot-tier in front, but for different reasons. The pedicle is, in fact, less distant at this point from the vulva, and the tumor does not press upon the instrument.

Previously to operating, whether by excision or ligature, and *à priori* before deciding upon the presence of a polypus, the condition of the parts should be carefully ascertained. In this, as in other cases, the neck should be attentively examined. It is commonly somewhat opened, sufficiently at least to admit the fore-finger; if a body of greater or less size and raised above the surface of the uterus be discovered in its cavity, an attempt should be made to pass the finger between it and the uterine walls, in some points of its circumference, and between them and its entire circumference when the pedicle is at its superior part. The passage of the finger between the tumor and the uterine wall is the most certain of the diagnostic signs.

Incomplete introversion of the uterus might lead to error; but the projection, which in this case exists in the centre of the uterus, can usually be effaced by gentle pressure. In semi-introversion, the tumor would be semi-globular and not pediculated; finally, the circular groove, formed in the larger diameter of the uterus by the introversion of its walls; touch by the hypogastrium and rectum; and the introduction of a curved sound into the bladder, with its point turned downwards and forwards towards the depressed portion of the uterus, would leave little room for error. Polypus in the uterus may be of a softish and granular tissue. These characters might lead one to suppose that

the fundus of the organ had undergone degeneration, as in the following case, of which Lisfranc gave an account to the Academy of Medicine; "The patient had labored for many years under a serous, sero-sanguineous discharge; she lost flesh; her complexion was yellow; but she suffered scarcely any pain. She had been touched by many distinguished surgeons, all of whom believed the disease to be cancer of the uterus. The finger, on passing through the inferior orifice of the uterus, entered at once into quite a large cavity, the walls of which were covered by a softish, granular tissue; it was easily torn, and bled with the utmost facility. The disease was unanimously believed to be a cancer, which was scooping out the parenchyma of the uterus in its passage from the interior to the exterior of the organ. I proposed slight cauterization, with the intention of retarding its progress and perhaps, as it was attended by no pain, of effecting a cure; the application of caustic could do no harm. I was not sure that the affection was essentially carcinomatous, and I had met with some, though extremely rare cases of cure.

"After five or six applications of the proto-nitrate acid of mercury, a fragment of a tumor, as large as an egg, was detached. On renewing my examination, I now found the neck of the uterus so widely opened that the index and middle fingers could be passed into its cavity; upon scratching the internal surface of the spot on which my fingers rested, I removed small pieces of it and came down to the soft, thinned, and healthy wall of the uterus; I instantly pronounced the disease a polypus and proposed its removal.

“ The neck of the uterus was seized by hooks, drawn down, and kept at the inferior orifice of the vagina; by means of the index and, sometimes, of the middle finger passed into the uterus, the polypus was almost entirely removed, by tearing and twisting; some portions, which adhered more firmly, were extracted by the polypus-forceps; but at last the organ was wholly freed from it, as both my assistants and myself ascertained. The polypus was fully as large as the fist; it was adherent to the whole internal surface of the uterus.” The fragments of this fibrous polypus, which was partially degenerated, were exhibited to the Academy.

Twenty-four days afterwards Lisfranc announced to the same society that the operation had not been followed by inflammation or any other bad symptoms, and that the patient was well enough to engage in her usual occupations.

This case clearly proves that all the practitioners consulted, and Lisfranc first, mistook the nature of the disease. Cauterization was determined on at all events. The possible existence of a polypus did not occur to their minds until a fragment of the tumor separated and came away. It was now found easy enough to pass the finger between it and the walls of the uterus. It is probable that if a similar attempt had been made, at the first examination, to ascertain whether the edges of the softish substance could be separated from the internal surface of the neck and of the uterine cavity, the same result would have obtained, and the applications of caustic — whose successful effects could not have been foreseen — been rendered unnecessary.

The general treatment, after extirpation of a polypus, consists of very moderate exercise, a light and, which is preferable, a vegetable diet, and attention to prevent or arrest the least congestion of the pelvis.

But in this case, as with polypi of the neck, the treatment does not terminate with the operation. An irritation, which has been kept up for months and sometimes for years, subsists by its own energy, and is even aggravated by an operation of some severity. This is, perhaps, the sole cause of the abdominal inflammation and the parenchymatous or venous metritis, which have proved so rapidly fatal, after ligature of a polypus; for it is a principle in pathology, that the removal of effects is not always so rapid as the cessation of causes. The presence of the foreign body has most frequently determined simple or œdematous hypertrophy of the uterus—a condition of the organ which must be borne in mind after removal of the tumor. Finally, cicatrization of the pedicle must be carefully watched.

A question, which has never yet been proposed, now remains for consideration. After the existence of a polypus has been ascertained and the necessity of its removal determined, should the operation be deferred on account of the menstrual period? Lisfranc answers the question by narrating the following case; “A young woman came from the South to Paris, on account of disease of the uterus. She had been under treatment, during three months, for uterine engorgement. Having been called in consultation, I was informed that expulsive pains recurred every eight days; this is a remarkable symptom and always indicative of a foreign

body in the uterus. On touching, I found the neck of the uterus dilated, almost obliterated ; and, on introducing my finger into the interior of the organ and describing with it arcs of a circle, I struck upon a rounded body, projecting about a line and a half above the surface. To avoid the possibility of mistake, I touched many times. Having finally succeeded in passing my finger between the tumor and the uterine walls, I announced with certainty the existence of a polypus. The patient was wasting visibly ; the necessity for an operation was urgent. But, as the catamenia were to appear on the next day, we thought it a sufficient reason for delay. Hemorrhage, followed by peritonitis, unfortunately supervened ; and in two days the patient died. The autopsy confirmed my diagnosis.

“ I have since seen, in ward St. Augustin, another patient die of metro-peritonitis occurring during the menstrual flow. I have, therefore, made up my mind never again to be deterred, by the presence or approach of the catamenia, from an operation of acknowledged and urgent necessity.”

CHAPTER VI.

REMARKS UPON DISPLACEMENT OF THE UTERUS AND UPON PESSARIES.

THIS division of uterine affections has not received much attention from Lisfranc. During the whole time in which I observed his practice, I never knew an instance of his employing a pessary as a means of cure. I shall confine myself to an exact report of the clinical lecture, delivered by him in 1835, on this subject.

Displacement of the uterus, says Lisfranc, is connected with and generally dependent upon its engorgement. It has been considered and treated, as an essential disease, without any regard to the uterine engorgement, of which it is merely a symptom; its cure, therefore, has been of very rare occurrence. Among the thousands of women whom I have touched, I have never found displacement without engorgement. The latter affection is, therefore, the object of treatment; and, when the engorgement has been resolved by the means indicated, the uterus nearly or quite returns, unless the displacement be very considerable, to its normal position.

Although applied to daily on account of displacement of the uterus, I never attach the slightest de-

gree of importance to it as a guide in the treatment. Complete prolapse may nevertheless exist ; that is to say, the uterus may project beyond the vulva, and its suspensory ligaments be so relaxed, that it cannot rise, even after resolution of the engorgement, to its original situation. This remark, however, is the result of reasoning only, as I have hitherto never failed in effecting a cure without maintaining the uterus in place by mechanical means. In one case, the os tinæ had descended to the vulva ; the prolapse had been treated for a long time and ineffectually by a pessary ; it was cured by my simple treatment. I know that pessaries may be employed as a resolvent, on the principle of compression upon the uterus ; but the chronic stage of the affection must be well established, for the vaginal irritation, if not assiduously watched, might do more than merely neutralize the good effects expected from the compression. I would moreover call to mind that, in women who have had sexual intercourse, the neck of the uterus is generally inclined backwards, and that this slight deviation does not constitute a morbid state.

Pessaries have been much improved in modern times, and their application facilitated. It is very important that they should be composed of a material not liable to swell from moisture ; for they then aggravate the symptoms, and oftentimes become insupportable. And even when free from this objection, *ninety-five* women out of a *hundred*, under ordinary circumstances, are so inconvenienced by them as to be obliged to abandon their use — a result which is frequently dependent upon their indiscriminate application. Pessaries are

appropriate only when the affection has a strongly marked chronic character; and, even in this stage, they cannot be tolerated in a variety of cases.

The form of a pessary should correspond to the indications to be fulfilled. In some cases, the cup-shaped pessary has struck me as excellent, because it affords better support and thus puts an end to the dragging pains in the loins and groins. The presence of a foreign body, however, causes a more or less profuse discharge; hence arises the necessity of washing it every two or three days; otherwise it becomes encrusted, and sometimes has been known to perforate the rectum and even the bladder. Independently of this reason, portions of the neck may get engaged in the opening in the pessary and project through it; it is therefore prudent not to leave it too long in the same position. I once applied a cup-shaped pessary, to complete the resolution of a chronic engorgement; the husband of the patient, thinking he was doing a fine thing, bored a number of holes through it. Some time afterwards, a cure having been effected, I touched her and found the uterus to resemble a pine-cone — each hole in the pessary being filled up by a small nipple-like projection from the neck.

In conclusion, resolution of the engorgement is the first object of the treatment; and, if the uterine displacement persist after it is effected, a pessary may be tried in those cases in which its use can be tolerated.

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